THE

# Horticulturist,

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

## The Great Discovery in Vegetation.

IT is one of the misfortunes of an editor to be expected to answer all questions, as if he were an oracle. It is all pleasant enough when his correspondent is lost in the woods, and he can speedily set him right, or when he is groping in some dark passage that only needs the glimmer of his farthing candle of experience, to make the way tolerably clear to him. But correspondents are often unreasonable, and ask for what is little short of a miracle. It is clear that an editor is not only expected to know everything, but that he is not to be allowed the comfort of belonging to any secret societies, or any of those little fraternities where such a charming air of mystery is thrown over the commonest subjects.

We are brought to these reflections by a letter that has just come before us, and which runs as follows:

DEAR SIR—I have been expecting in the last two numbers, to hear from you on the subject of the great discovery in vegetation, which was laid before the committee of the State Agricultural Society at its annual meeting in January last. You were, if I mistake not, a member of that committee, and of course, the fullest disclosures of the secret of the gentleman who claims to have found out a new "principle in vegetation," were laid before you. No formal report, has, I think, been published by the Society. The public are, therefore, in the dark still. Is this right, when the discoverer is now urging the legislature of this state to pass a bill giving him a bonus of $150,000 to make his secret public, for the benefit of all cultivators of the soil? Either the thing is pure humbug, or there is something in it worthy of attention. Pray enlighten us on this subject? Yours, &c.

Yes, we were upon that committee, and nothing would give us greater pleasure than to unburden our heart to the public on this subject, and rid our bosom of this "perilous stuff" that has weighed upon us ever since. But alas! this gentleman who has

been urging his great discovery upon the attention of congress and the legislature for ten or twelve years past, put all the committee under a solemn vow of secrecy, though we protested at the time against his expecting that a horticultural editor should preserve silence touching anything that is told him *sub rosa*.

And yet we would not treat our correspondent rudely—for his letter only expresses what a good many others have expressed to us verbally. We shall, therefore, endeavor to console him for the want of the learned dissertation on vegetable physiology which he no doubt expected, by telling him a story.

Once on a time there was a little spaniel who lived only for the good of his race. He had a mild countenance, and looked at the first, enough like other dogs. But for all that he was an oddity. Year in and year out, this little spaniel wandered about with a wise look, like the men that gaze at the stars through the great telescopes. The fact was, he had taken it into his head that he was a philosopher, and had discovered a great secret. This was no less than the secret of *instinct* by which dogs do so many wonderful things, that some men with all their big looks, their learning, yes, and even their wonderful knack of talking, cannot do.

It was curious to see how the little spaniel who had turned philoshpher, gave himself up to this fancy that had got into his head. He had a comfortable kennel, where he might have kept house, barked, looked after trespassers, where he might have been well fed, and had a jolly time of it like other dogs.

But no, he was far too wise for that. He had, as he said, found out something that would alter the whole "platform" on which dogs stood, something that would help them to carry their heads higher than many men he could name, instead of being obliged to play second fiddle to the horse. If the community of dogs in general would but listen to him, he would teach them not only how to be always wise and rich, how to be strong and hearty, but above all, how to preserve their scent—for the scent is a pleasure that dogs prize as much as some old ladies who take snuff. In short, the knowledge of this wonderful discovery would bring about a canine millennium—for he assured them that not only was every one of them entitled to his "day," but that "a good time was coming," even for dogs.

And why, you will say, did not our philosopher divulge for the benefit of the whole family of dogs? "It is so pleasant to do something for the elevation of our race," as the travelled monkey thought when he was teaching his brothers to walk on their hind legs. All the dogs in the country could not but owe him a debt of gratitude, since they would soon become so wise that they might even teach their masters something of instinct. And then they would be so happy—since there would not be a downcast tail in all the land—for the whole country would be in one perpetual wag of delight.

Ah! dear reader, we see that you, who put such questions, know nothing either of philosophy, or the world. As if the people who discover why the world turns round, and the stars shine, throw their knowledge into the street for every dog to trample on. No, indeed! They will have a patent for it, or a great sum of money from the government, or something of that sort. It would be a sorry fellow who should think that every new thing found out is to be given away to every body

for nothing at all, in that manner. To be sure, it would, perhaps, benefit mankind all the more, but that is only half the question. "If you think the moon is made of green cheese," said our curly philosopher to his friends, "you are greatly mistaken. I am well satisfied, for my part, that that is only a vulgar error. If it had been, JOHN BULL would have eaten it up for lunch a long time ago."

So our philosopher went about among his fellow dogs, far and near, and spent most of his little patrimony in waiting on distinguished mastiffs, Newfoundlands, and curs of high degree. He went, also, to all conventions or public assemblies, where wise terriers were in the habit of putting their heads together for the public good. Wherever he went, you would see him holding some poor victim by the button, expounding his great secret, and showing how the progress, yes, and the very existence of dogs, depended upon the knowledge of his *secret*—since it would really explain in a moment everything that had been dark since the days when their great-grandfathers were kept from drowning in the ark. Only let the congress of grey-hounds agree to pay him a million of money, and he would make known principles that would make the distemper cease, and all the other ills that dog-flesh is heir to, fade clean out of memory.

Some of the big dogs to whom he told his secret, (always, remember, in the strictest confidence,) shook their heads, and looked wise; others, to get rid of his endless lectures, gave him a certificate, saying that Solomon was wrong when he said there was nothing new under the sun; and all agreed that there was no denying that there is *something* in it, though they could not exactly say it was a new discovery.

Finally, after a long time spent in lobbying, and after wise talks with all the members that would listen to him, yes, and after exhibiting to every dog that had an hour to give him, his collection of dogs' bones that had died solely because of the lamentable ignorance of his secret in dog-dom, he found a committee that took hold of his doctrine in good earnest—quite determined to do justice to him, and vote him a million if he deserved it, but, nevertheless, quite determined not to be humbugged by any false doggerel, however potent it might have been to terriers less experienced in this current commodity of many modern philosophers.

It was a long story, that the committee were obliged to hear, and there were plenty of hard words thrown in to puzzle terriers who might not have had a scientific education in their youth. But the dogs on the committee were not to be puzzled; they seized hold of the fundamental principle of the philosophic spaniel, tossed it, and worried it, and shook it, till it stood out, at last, quite a simple truth, (how beautiful is deep philosophy,) and it was this—

THE GREAT SECRET *of perfect instinct in dogs, is* TO KEEP THEIR NOSES COOL.

Of course, the majority of the committee were startled and delighted with the novelty and grandeur of the discovery. There were, to be sure, a few who had the foolhardiness to remark, that the thing was *not* new, and had been acted upon, time out of mind, in all good kennels. But the philosopher soon put down such nonsense, by observing that the fact might, perchance, have been known to a few, but who, before him, had ever shown the PRINCIPLE of the thing?

And now, we should like to see that cur who shall dare to say the canine philoso-

pher who has spent his life in studying nature and the books, to such good results, shall not have a million for his discovery?

## ON GRAPES AND WINE.

BY N. LONGWORTH, CINCINNATI, O.

MR. DOWNING—There is much experience, and the best of all sense, common sense, in your remarks in your Dec. No., on the cultivation of the foreign grape in the open ground. But you say "Mr. LONGWORTH has tried it on a *small scale*." Had you expended as large a sum as I have done on this wild goose chase, for twenty years, if a *Jerseyman*, you would deem it a *large scale*. There never was a year, for twenty years, that I did not collect foreign grape roots from some of our eastern cities. I also imported over 5,000 grape roots from Madeira, of all their best wine grapes. As many from the middle part of France, and from Germany. All lived, and were cultivated for a few years, and finally discarded. As a last trial, I imported 6,000 roots, composed of 24 varieties of grapes, from the mountains of Jura, in the north part of France, where the vine region suddenly ends. Their vineyards are for months covered with snow. My success was no better than with vines from a warmer latitude. Grafting a foreign grape on wild stock, as you truly observe, does not render the graft more hardy. I have had the grafts to grow with great vigor, but occasionally they were killed, even down to the native stock. We must look to our native grapes and seedlings from them, and to a cross with the best foreign, for our supply. In our latitude, even for the table, few foreign grapes can surpass the *Herbemont*, *Ohio*, *Missouri*, and some others recently introduced.

I hope to send you a sample of sparkling Catawba manufactured by Mr. FOURNAY, as it has now been in the bottle nearly two years. Those heretofore sold, were bottled by my former manufacturer. Two reasons lead me to believe my sparkling wine will compare favorably with the best French Champaign. It is better flavored, because it is made from the Catawba wine, only. In Champaign, three or four kinds of wine are *mixed* together, as they say, because the one possesses the aroma and flavor, another the effervescence, another the strength. If true, the wine cannot be as well flavored, or as healthy, as it would be from a grape containing all these requisites, which the Catawba does. A second reason is, that no wine made from a mixture of three or four kinds, can be as healthy to the stomach as where made from a single variety. If the Champaign manufacturers were allied, even in the forty-second degree, to Yankees or Jerseymen, I should suspect a stronger reason for the mixture—i. e.: the wine of fine aroma and flavor costs $1 per gallon. The others, from 50 cents down to 25 cents per gallon. My opinion of the *healthy* character of the sparkling wine, made from one variety of grape, is confirmed in a letter I received a few days since, from a physician of Boston, whose name will give credence to the principle wherever it is known.

He says, "From some trials made of your Champaign wine, I am induced to believe it possesses peculiar advantages for the sick, and that it might be important to have some of it at hand. J. C. WARREN." Yours truly,

N. LONGWORTH.

[What our correspondent says about the grape culture is full of practical value. His sparkling wine is rapidly gaining favor, and we are confident that the wines of the Ohio—light, pure, and wholesome, will at no distant day be in high repute. ED.]

# AN ELOQUENT PLEA FOR BIRDS.

BY WILD FLOWER, NEW-ENGLAND.

[We heartily sympathise with the following eloquent and beautiful appeal for the little feathered creatures of the air, from our fair unknown correspondent in New-England. If there is any common sight more truly mean and contemptible in our eyes than another, it is that of a biped, with a gun on his shoulder, making game of blue birds and sparrows. And yet our community is, for the most part, callous to the commission of the sin. We recommend such to the perusal of the following, and pray that their consciences may awaken. Ed.]

Mr. Downing—I did not think to have trespassed on your kindness again, or ventured before so wide an audience, even behind my friendly veil. But this time my errand is not to my own sex. I am figuratively on my knees to the gentlemen. Not to any, however, who have a right to smile at my petitioning humility. I come as a memorialist before the law makers of our country, to beseech them for my friends, my companions, my darlings, the little birds. Even as I write, the song of a blue-bird, shivering in this untimely snow, seems in its plaintive cheerfulness to encourage my undertaking. Gentlemen of the legislatures! past, present, and to come, you are very good to the eatable fowls of heaven; woodcock, snipe, partriges, quails, all feel the weight of your protecting influence, but who cares for the singing birds? If they were nightingales, indeed, and their tongues a "lordly dish," as once they were to the Roman epicures, the friendless things might hope for a reprieve; but now they sing their gentle life away, without confidence or hope in its endurance. Day-by-day, boys, who ought rather to be barrelled up with a spelling-book till they come to years of discretion, shoulder their old fowling pieces and stroll the fields with some attendant cur, to try how many dear, harmless, happy little creatures, they can deprive of all they possess, their life; indeed, I grow indignant at the thought. Here the blue-birds sing peacefully, and the song-sparrow warbles with confident sweetness, for no wandering biped comes within these bounds unquestioned by a great dog, happily gifted with a bark much beyond his bite. But in the fields about, I see almost daily one of these little stalking Herods, bent on the murder of these next loveliest thing to children, the innocents of dumb creation. I know very well, they seem to you comparatively useless; they don't do anything but sing. Neither does Jenny Lind! Will you call the fair Swede a useless unit in creation? Is it no good to awaken in so many tired and dusty hearts the breath of hope, and the pulses of nature? And the birds are the poor man's orchestra, the country-girl's concert, the interpreters of earth's great laboring heart and sealed lips. Theirs is an incessant psalm of gratitude, always harmonious with the deep chorus of the inanimate music of creation. They teach us the very lessons of heaven, hope, faith, charity. They are the first to celebrate the slow steps of spring; the last to leave us in the advent of frosty winter; the heralds of rain to the thirsty earth; the prophets of sunshine to the frozen ground. They are the poets of those flowers that live and die unseen of man; and in their tiny love songs tell us, who listen, fairy tales of desolate water-lilies, and gorgeous painted-cups that the summer-moth has deserted.

Beside, they eat up bugs! Am I coming to common-sense now? I avow it as my firm belief, that all the discussions about the curculio which vex the horticultural soul from day to day, would come to a peaceful end if there were birds enough to eat the creatures up. Were our fore-fathers beset with these spoilers of the fruit? Did not my grand-mother's

garden teem with plums, apricots, and peaches, of every kind and color? Was the curculio made expressly for the vexation of later days, or is it that the feathered toll-gatherers are gone too: and to use your own language, oh conscript fathers! "the supply exceeds the demand" of every bug that caters for itself in our thriftless orchards.

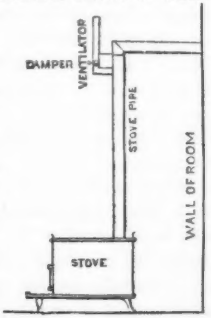
I should not dare to raise my feeble voice in this behalf through any other medium than the Horticulturist; but I know my audience here are the forest trees, as it were, of the land. Sturdy, sensible, culturers of the soil. Educated, intelligent possessors of gardens and green-houses. Electors, if not members, of the legislative bodies. And I am supported by the wide sympathies of every pomological convention and fruit-grower in the land. Strong in this triple shield, I ask you, assembling citizens of this free and fertile country, to have regard in your laws to the birds. Do not let them be slaughtered for the wanton pleasure of school-boys, or the improvement in shooting of the older, but scarce wiser men. Throw around their wind-swung cradle, the sheltering film of legal pains and penalties. Guard their untried wings with fines and prosecutions, to the disturbing and destroying hand. Let them fairly grow up, at the least. Somewhat encourage the song and appetite that give you pleasure, and the insects an end. If it please you to permit their shooting after a certain date, yet let them arrive to some strength and flight. A hand of greater power and tenderness than is apparent to you, has given them means of escape; a pure air and wide sky open before them; and if the leaden message overtake even their rapid pinions, they shall not fall unnoted or uncared for. It is not life, or food, or any other alms, they ask from human compassion; but merely such protection to their existence as is most for human benefit. My dear sirs! care for the birds a little, and they shall care for you! Your fruit shall ripen in August suns. Your plantations shall echo to songs that will be vocal gratitude to your conscience. And all lovers of the woods and fields will bless you in their heart for the little comrades of their pleasure. Last and least, you will have, though it be of faint and scorned value, the sweetest perfume of thanks that lies folded away in the heart of a

WILD FLOWER.

*In the Bushes, March* 10, 1851.

## A CHEAP VENTILATOR.

DEAR SIR—In your Dec. No. you mention that Dr. ARNOTT'S chimney valve is the best cheap ventilating apparatus. I wish to describe a cheaper and more simple one, invented by my friend PETER TAYLOR, Esq., of this place, and which has succeeded admirably wherever it has been tried. It can be attached to any stove pipe for less than a dollar, and will ventilate rooms heated by a stove, the pipe from which goes into a chimney in an adjoining room, and to which Arnott's invention could not be applied.




It is simply an elbow of sheet iron, of, say three inches in diameter, attached to the upper part of the stove pipe, with the mouth uppermost near the ceiling; the short leg of the elbow and the long leg of the stove pipe and chimney, forming an air syphon through which the heated air from the upper part of the room rushes with great rapidity and of course cold air replaces it from without the room. It can be regulated by having a damper on it, so as to cool the room in a very short time, from excessive heat, to any temperature you may choose. There is no danger of smoke escaping by the ventilator; in fact the air rushes in with such velocity as to drive a toy wind-mill placed in the mouth of it.

JAMES DOUGALL.

*Rosebank, near Amherstburgh, Canada West, Jan.* 7, 1851.

# WAYNE COUNTY—THE ORCHARD OF NEW-YORK.

BY R. G. PARDEE, PALMYRA, N. Y.

NOTHING has attracted more attention lately in the markets of New-York, than the superb fruits of Wayne county. The pears especially—the fairest and most delicious Doyennes or Virgalieus to be found in that market—come not from the Hudson, from New-Jersey or Pennsylvania—but, barrels upon barrels, from *Wayne county*. The soil of that county, abounding in lime and potash, seems so especially adapted to the growth of all the fine fruits, that the orchards and fruit gardens of that central portion of New-York will, with very little care, produce not only the greatest abundance for the owners, but enable them to export more fruit than any county in the state. We are much obliged to Mr. PARDEE for an opportunity to put on record the natural orchard fertility of this portion of New-York. Our pages have lately had so many more accounts of the *pests* of the orchard, in the shape of insects, that a stranger to the actual products of our orchards might almost think the blight and the curculio left us neither pear nor plum, from one end of the land to the other, while the fact is just the contrary. ED.

MR. DOWNING—It is quite pleasant to comply with your request, to furnish the readers of the Horticulturist with some of the interesting facts connected with the cultivation of fruit in Wayne county.

The county comprises a strip of land, say 17 to 20 miles wide, by 38 to 40 long, bordering on Lake Ontario, between Oswego and Rochester. Sixty-five years ago it was a heavy timbered forest, uninhabited by the white man. At the present time that forest is almost subdued, so that there are very few acres of waste land to be seen in all its length and breadth, particularly in the western or older part, where, indeed, I may say there is hardly an untillable hill, or an unrecoverable spot of low ground, or a stony acre visible, so that Prof. NORTON justly recorded of it—"This is a superb country, with wonderful natural advantages."

The face of the land, except from the Lake up to the Ridge Road, some four or five miles, is gently rolling, mostly from east to west. The soil is a mixture of sandy and gravelly loam, with sections moderately mixed with clay; is easily tilled, and the crops are very certain.

The soil and climate of Wayne county prove to be particularly favorable to the growth and perfection of all our various kinds of fine fruit. The grape, the raspberry, the blackberry and the strawberry, with civil attention, amply reward our care.

The pear has, to a very great extent, escaped or recovered from the effects of the pear blight, and the old standard pear trees around us have, during the last season, borne so well, that one firm in this village alone, shipped eastward last fall, between one hundred and fifty and two hundred barrels of the delicious "Virgalieu," as the White Doyenne is familiarly called in market. A few years hence our county will greatly increase its exports of this article from our young pear orchards, for the Messrs. YEOMANS of Walworth, have already set out of this variety alone, over *four thousand trees* on the quince, and E. BLACKMAN, Esq., of Newark, has also fifteen hundred trees for market production, besides numerous smaller orchards, I might name, including not only this favorite variety, but from ten to fifty or seventy other of the choicest varieties.

It has not yet come to my knowledge that the Virgalieu has, in our county, shown symptoms of cracking or degeneracy, although such may possibly be the case.

The peach is a great favorite in our county, and well it may be, for it grows almost spon-

taneously; is reliable for the market, and its quality cannot be surpassed, as our premiums witness when in competition occasionally at the state Fair. In favorable seasons our county exports not far fron *ten thousand bushels of dried peaches*, but these are mostly from our common peach orchards, Rare Ripes, &c. Some of our private fruit growers number from sixty to seventy selected varieties of the peach, already in fruit, while a great portion of our citizens have from ten to twenty of the choicest varieties around their dwellings. We cannot, of course, compete with our New-Jersey and Delaware friends in the extent of our peach orchards, and yet many are growing this fruit in various parts of our county quite extensively, for market. One of our farmers, Mr. ODELL, in the extreme north-east portion of the county, has already a rare peach orchard of fifteen hundred of the best varieties of trees, in bearing I am told, and for which he designs to seek a market by the help of a small schooner, via Oswego. Our poorest families can, many of them even now, indulge plentifully in the finest George IVth and Crawford Peaches, and the number is rapidly increasing.

Of cherries, it need only to be said that we raise them in abundant quantities, of unsurpassed flavor and size, and of the finest varieties.

We have a very large quantity of plums, including most of the new and best kinds, grown in our county; and the exports of dried plums from our county, in favorable seasons, will not vary much from *three thousand bushels*. But within a year or two, the black wart has most virulently and fatally attacked our plum trees, and threatens entire destruction to this fruit. The Peach Plum, and some other kinds, seem as yet to escape. but the genuine Green Gage, and most other kinds, are going rapidly. We do not so much regret this, as it has been a favorite argument with some dealers for years past, that compared with the peach it was hardly worth growing; being of the same season, of more difficult cultivation, and inferior fruit in all respects. This, however, has not prevented our enterprising amateurs from obtaining most of the desirable varieties.

We now come to our most important fruit, the apple, which, perhaps, no where grows more freely with little care, than with us, and yet our finest fruit growers always give the best cultivation. We have examples around us of high cultivation, that would do honor to the Hudson river districts; for instance, a retired merchant in a neighboring town, first purchased a side-hill of ten or fifteen acres, for a fruit orchard, and liberally supplied it with about five hundred loads of manure, the same quantity of leached ashes, and about an equal amount of swamp muck and coal-pit bottoms—after which he trenched it, and thorough drained the whole with pipe, until now I much doubt whether our county or any other, can any where produce an orchard of trees of five years old, of such extraordinary size and productiveness, as that of Mr. YEOMANS, of Walworth. I understood Prof. NORTON to say as much of this fine orchard, when we together visited this place last fall.

But to return, I can add while the apple always gratefully repays superior care, yet it is also true, that our orchards, left almost to nature with us, produce a fair quantity of excellent fruit.

Our orchards often largely overrun the estimate of production, a striking instance of which occurred last fall, where an intelligent farmer and his neighbors estimated the product of his orchard at one hundred barrels, and so sold it to the speculator, who succeeded in obtaining, however, more than five hundred barrels from it. Numerous other instances of orchards yielding two and three times as much as estimated, came under my own observation. Our single port of Palmyra, during the last season, cleared more than *fifty-eight thousand barrels of grafted fruit* east, and ten to *twelve thousand bushels of dried fruit*, while east of us, in our county, remains the large and flourishing villages of

Lyons, Newark and Clyde, to ship their quota. Mr. Wm. H. Rogers, of Williamson, one of our lake towns, who obtained the first premium of a silver medal and diploma, at the late annual meeting of the New-York State Agricultural Society, at Albany, for the *best* and *largest* (134 varieties) collection of winter apples—is a young and enterprising farmer, occupying about one hundred acres of land, on forty-five of which he has growing in the finest condition, over seventeen hundred trees, comprising sixty to seventy varieties of the choicest apples. Other farmers have immense orchards, which yield up their products to them with no sparing hand. A few seasons since, one of my neighbors had two thousand grafts set in one spring, on a farm he had recently bought. Among the earliest pioneers of Wayne county, were the Foster and Reeve families of this town, who penetrated this then unbroken wilderness, selected their location, marked their "pre-emption tree," and at the foot of the tree cleared away a few feet of ground, and sowed first some apple seeds for a nursery, and returned east to Long-Island, after securing their title to their soil.

The following season they returned with their families, and brought and introduced into their small nursery, grafts of the Esopus Spitzenburgh, Rhode Island Greening, and Roxbury Russet Apples, and from this small beginning these varieties spread in every direction, so that now these three standard varieties seem to predominate in our market.

I was quite surprised two years ago, on examining the last report of the canal commissioners, to find in the returns for that year, that the collectors' offices of Palmyra and Lyons, in our retired county, had shipped during the year, more dried fruit, by more than thirty per cent, than the entire state west of us, including Rochester and Buffalo, and of course, including the Ohio fruit via Buffalo; and also fifteen per cent. more than the entire state east of us to Albany. All the offices east cleared six hundred and ten thousand pounds; those west cleared five hundred and thirty-eight thousand pounds, while Lyons and Palmyra cleared seven hundred and eight thousand pounds.

And yet it seems quite certain, that fruit raising in our county was never so popular as at the present time, or were there ever so many practically engaged urging it forward. It is made apparent to every one here, that to enjoy in profusion the finest fruits the world produces, costs really very little besides the pleasure of its cultivation; but the enthusiasm excited on the subject, causes fruit to be cultivated in many quarters, with most extraordinary care, and liberality of expenditure. Among men of various pursuits, I might instance Messrs. Lovett & Rogers, merchants of this village, Mr. M. Mackie, a farmer of Galen, and Mr. H. G. Dickenson of Lyons, an enterprising and intelligent mechanic, who has already over fifteen hundred fruit trees growing on his beautiful grounds.

Our sister village of Lyons started very early in the pursuit of raising rare fruits, and now can exhibit fruit gardens and orchards of great size and excellence.

Wayne county is under lasting obligations to our truly esteemed friends, John J. Thomas and Wm. R. Smith of Macedon, for their liberal exhibition of the choicest and most approved varieties of fruits, and also for supplying us with reliable kinds at cheap rates. I believe I can say in the name of Wayne county, they have *never deceived us*, which is a rare testimony for nurserymen, who with all their care are often liable to be deceived themselves.

Our Rochester friends, and Albany friends, and Flushing friends, and particularly our Newburgh friends, justly claim our acknowledgments, also, on behalf of their respective nurseries.

And yet the desire to *increase* our fine fruits, was never greater than at present. Last spring a farmer, north, sold and delivered in the northern range of two or three of our

lake towns, four thousand fruit trees during the transplanting season; and yet we have no fear that as fine fruits as we can easily raise in Wayne county, will ever need to beg for a market. We will cordially rejoice with those who can or will excel us, and engage never to be jealous over a rival.

R. G. PARDEE.

*Palmyra, Feb.*, 1851.

## ON THE IMPROVEMENT OF FRUIT BY CROSS-BREEDING.

BY JOHN TOWNLEY, PORT HOPE, WISCONSIN.

IN the July number of the Cultivator, is the substance of a paper by the President of the Massachusetts Horticultural Society, on raising new pears. He urges the importance of raising seeds for new varieties by crossing, regularly and systematically conducted, and proposes that two good varieties of summer, autumn and winter pears, should be grown in three different locations, a quarter of a mile a part, and out of the influence of other pear trees. The Seckel and Louise Bonne de Jersey, for instance, are to be grown by themselves, and the seeds, when taken from the ripe fruit, are to be labelled, Louise Bonne fertilised by the Seckel, and the Seckel fertilised by Louise Bonne.

It is a matter of some importance to raise new varieties of fruit, which, by the same expenditure of land and labor, will yield more certain and more abundant crops, and of greater excellence than many varieties we now possess. It is desirable, therefore, that all who may wish to devote a portion of their time to this good work, should know by what means they can most certainly attain the object they have in view. I entirely coincide in the opinion that cross-breeding is that means; but I cannot so readily subscribe to the author's method of conducting the experiment—and I venture to hope that I shall be able to prove that my objections are well founded.

It is usual with the best cultivators *especially* to *fertilise* a few flowers, not to trust to crosses which may incidentally take place between varieties growing contiguous to each other, which appears to be the plan recommended. A man may botanise a summer through without meeting with a single plant which he has reason to believe to be the offspring of two parents; yet there is little doubt that many of our wild flowers can be made to intermarry with each other. In gardens, a closer relationship exists between many plants, than between the wild flowers of the fields. We have in the garden, many varieties of one species; in the woods each plant is a distinct species—and experience has proved that it is much easier to breed between varieties than between species; hence, in gardens, natural crosses not unfrequently occur. But it will be found a true saying in this, as of more important matters, that "it is well not to trust to others what we can do ourselves"—and of all helps, the wind and insects will be found most capricious, and little to be relied on. Pollen is known to be conveyed by the wind, for miles, and bees in their wanderings, do not limit their flights to the extent of a quarter of a mile; there is, therefore, almost as great a probability that the seeds of the two trees growing side by side, would be fertilised by the pollen of others growing at a distance, as that one tree should fertilise the flowers of the other. Each blossom of the pear, moreover, is provided with its own stamens, affording pollen at the exact time when the embryo seeds are in a condition to be fertilised. I am quite at a loss to understand by what freak the pollen of the flowers of each tree is to fertilise the seeds of its neighbor, rather than its own. That some may be cross fertilised, is probable, but they will be exceptions—and in our endeavors to improve the pear, whose seedlings require so long a period to arrive at maturity, in a matter so important as cross-

breeding—certainty should be substituted for chance when it can so easily be done. The late Mr. KNIGHT and the Rev. Mr. HERBERT, who have probably made more experiments in cross-breeding and hybridising plants, than any other men—applied the pollen artificially, and invariably removed the stamens from the flowers to produce seed, before their pollen had arrived at maturity, because they knew that the pistil was so likely to be affected by its own stamens, that there could be no certainty as to the result of their experiments, unless they were destroyed while yet in an imperfect state. How much less, then, must be the chances of obtaining cross-fertilised seeds, when not only the stamens are not removed, but pollen from another plant is not directly applied. By operating on a few flowers, after the manner of KNIGHT and HERBERT, we may be sure that our seeds are cross-fertilised; by trusting to the wind and insects, there can obviously be very little certainty about the matter. The author of the paper referred to being a nurseryman, I apprehend knows perfectly well what is the usual mode of proceeding in this matter, but may have considered that it was of little use recommending the practice generally, many not knowing much about the sexual organs of plants, and the mode of distinguishing them and conducting the experiment being somewhat difficult of explanation on paper, though in the field the easiest thing imaginable. I think, however, that it may be done; and as some readers of this Journal who have not hitherto bestowed much attention on the subject, may possibly be induced to take an active interest in it, a few further remarks on the object of cross-breeding, the mode of conducting the operation, and of cultivating the seed-bearing plants, may not be devoid of use.

In all that regards reproduction, a close analogy seems to subsist between plants and animals; and he who is a successful breeder of one, may, by applying the same principles, become an equally successful improver of the other, providing he brings to his task an equally competent knowledge of what constitutes excellence.

Both plants and animals will only breed within certain limits. As a general rule, two animals of distinct genera cannot be made to breed with each other—and it is doubted by those most likely to know, whether a truly bi-generic mule plant has yet been seen. Animals of two distinct species belonging to one genus, as the horse and the ass, are well known to breed together, and that the offspring are incapable of reproduction. So of plants; the Morello, for instance, has been made by Mr. KNIGHT to breed with the common cherry, two distinct species, and the progeny were true mules, affording abundance of blossoms, but no fruit.

Again, a species of animal or plant is capable of being progressively improved by the skill of man, or, in other words, they can be made to assume, by improved culture and judicious selection, through successive generations, various modified forms and qualities which better enable them to minister to man's wants, than the species from which they were originally derived. Now, plants or animals, which culture or domestication have much altered from the normal condition of the species, are not alike in all particulars. Owing to some peculiarity of constitution, some are better adapted to one soil or climate than to another, and those suited to a given location are found to possess various degrees of excellence. These, then, constitute the materials with which the cross-breeder or improver has to work; and it is highly desirable if not requisite, that he be well acquainted with his materials; he should know what has already been done, and be a good judge of plants or animals, as the case may be, in order that he may be better able to determine what remains to be accomplished, and what varieties of flowers or fruits, or breeds of animals, are best calculated to further his views.

It is advisable at the out-set, to consider well what constitutes perfection. The impro-

ver should study his subject point by point, put his thoughts on paper, and to this ideal standard of perfection, he should constantly aim. This will save him from aiming at one thing at one time, and another thing another time—and there is little doubt that his stock would shortly assume a decided character.

Most important points to be attended to in selecting plants or animals, to breed from, are, that they shall be hardy, adapted to the climate, and free from disease. The certainty of produce, and consequently the profit to be derived from fruit trees in a given number of years, depends much on their hardiness, and on the power of their blossoms to withstand spring frosts; and there are many facts on record which seem to indicate that disease is hereditary in the vegetable, as it is in the animal kingdom.

The principal objects of cross-breeding are, to add vigor to the constitution; to modify, or get rid of defects, and to combine many good properties in one individual, in the shortest time. It is a common practice with the breeders of cattle, to obtain bulls now and then from other herds, rather than to breed from generation to generation, from their own stock—the object being, in some cases at least, to prevent the stock from becoming delicate—a cross from another herd being found to invigorate the constitution. And Mr. KNIGHT, in his numerous experiments to obtain improved varieties of vegetables and fruit, "found that he obtained an increased vigor and luxuriance of growth when the fecundation of the blossoms of a variety was produced by the pollen of another kind."

Again, cross-breeding is resorted to with a view to obliterate defects, and to combine many excellencies in one individual, in the shortest time. Supposing, for instance, a man had a herd of Short-horns—good in all points, excepting that they were somewhat too light in the hind quarters; he might, in the course of several generations, by culling his animals to breed from which showed this defect the least, so improve his stock as to bring it near to perfection; but, supposing instead of this, when made conscious of the defects of his herd, he at once obtained a Short-horn bull, good in all points, except that it was too full in the hind quarters, defective in the opposite degree; the result would probably be that the progeny would be more symmetrical than either of its parents, perhaps more so than if the bull had been perfect. Thus by one judicious cross, a breeder might cause his animals to attain a high degree of perfection in one generation, which, if he had confined himself to his own stock, would have taken him several generations to accomplish.

Until recent times—for it is but lately that the nature of the sexes of plants was clearly understood, (Mr. KNIGHT being the first I believe to turn this knowledge to practical account,) men had to take advantage of any deviation which appeared in their crops naturally, or as the result of improved culture; and if the cultivator wished to perpetuate an improved variety, or obtain others better, he grew and seeded the plants alone; and if any seedling raised from it was better than the parent, that only was sown; seed from it sown; the best again selected, and so on through successive generations. A practice similar, it will be observed, to the breeding in-and-in of animals. Now, the practiced experimenter having a distinct object in view, a certain standard of excellence to aim at, carefully examines his plants, not with a view to select one but several; he notes their power to withstand adverse weather; their habit of growth; the character of their foliage; the abundance, form, substance, color, size and fragrance of their flowers; or the quantity, quality, size and beauty of their fruit, and the period it arrives at maturity. If he finds a plant having one good point in perfection, and not remarkably defective otherwise, it is suited to his purpose; he may cross this with another plant having a second good point, and tolerably good in other respects, and may thus combine the two good properties in one individual. But if he could only meet with plants possessing these two good points, which

had also marked defects, providing the defects of one were opposed to the defects of the other, so that if he could blend the two together a more perfect plant would be obtained than either, these two might be suited to his purpose; he might cross them in the hope that the defects of one parent would counteract the defects of the other, and enable him to unite their two good properties in one individual, without the plant being otherwise objectionable. If, in the same season, two other plants, possessing two other good points, were crossed, and with a like result, the best of the seedlings obtained from each of these crosses, might be crossed, and it is probable that in the next generation a seedling would be raised in which the four good points would be combined. At the present day, however, the experimenter, instead of having to commence operations with an original species, has to deal chiefly with varieties already considerably improved. The Seckel and Louise Bonne de Jersey Pears, for instance, which it is proposed to cross, possess to begin with, many desirable qualities. They are both hardy, adapted to the climate, good bearers, and yield fruit of first rate excellence. But the fruit of Louise Bonne de Jersey is larger and handsomer than that of the Seckel; while the fruit of the Seckel is superior in quality to that of the Louise Bonne. If, therefore, seeds of Louise Bonne were fertilised by the Seckel, and the fruit, bearing these seeds, made by superior management to attain a greater size and higher flavor, than by ordinary culture they ever attain to, it is likely a variety would be raised whose fruit would rival the Seckel in quality, and Louise Bonne in size and beauty. I need not pursue this further; it must be sufficiently apparent that cross-breeding when properly conducted, is a short cut to perfection—it enables one to effect in a few generations, what the former practice would have taken many generations to accomplish; hence, the truly marvellous improvement which has been made within the last twenty years, in plants whose seedlings require a comparatively short period to arrive at maturity, as the rose, pelargonium, fuschia, calceolaria, strawberry, &c.

Next, as to the mode of cross-breeding plants. The apple, pear, peach, plum, cherry, raspberry and strawberry, all belong to the natural order *Rosacea*, and their flowers have an indefinite number of stamens, about twenty or more. But as one not previously acquainted with these organs, may be somewhat puzzled to distinguish them from the pistils, if the study is commenced with the flowers of these plants, it will be well to examine first some flowers which have a certain and fewer number of stamens. Take the currant, for example, one of the earliest plants in blossom, and found in almost every garden. With a pen-knife slit carefully down one side of a full bloom flower, so as to spread it open for examination. There will be found an outer covering, or envelope, divided at the edge into five small parts; this is the calyx of the flower; next are five small leaflets—the petals, situated alternately with the segments of the calyx; then we have five small bodies alternate with the petals, and seated like them, on the throat of the calyx; these are the stamens, or male organs, which produce the yellow fertilising dust, called pollen. In the center of the flower is the pistil, or female organ, a small, greenish, thread-like point, more or less two-cleft at the summit, and which is seated directly on the miniature berry containing the embryo seeds, and not on the calyx, as the stamens. Having well examined these flowers, there will be no difficulty in distinguishing similar parts in the flowers of other plants. In the pear, there is the green calyx outside, divided at the edge into five small segments; then there are five large distinct petals, next numerous stamens, each tipped with a little head or anther, producing the yellow pollen grains; and lastly two to five pistils in the center. Now, all that requires to be done to cross between two varieties, is this; the flowers to produce seed must be carefully opened just before they naturally expand—before any pollen is visible, and the stamens must be removed with a pair of

small pointed scissors, taking great care to leave the pilstil in the center of the flower uninjured; then, when these flowers have expanded, perfect flowers of the variety intended for the male parent, must be collected, and the pollen from them gently dusted on the summit of the pistil. The best time to apply [with a small camel's-hair brush] the pollen, is in the middle of a dry sunny day, and for fear of failure it should be repeated three or four days in succession. The petals of the flowers have been observed to fall soon after the seeds were fertilised, and to retain their freshness for days longer, when this had not taken place.

Owing to the difference in the size of flowers, and the position of the stamens, the pear will be found much easier for the learner to operate on, than the currant.

There are one or two other points, which, if attended to, may contribute to the success of the experimenter. Not only should much care be bestowed in selecting varieties to raise seeds from, but they should be so managed as to ensure a healthy and vigorous growth, and the finest fruit and most perfect seeds which the variety cultivated is capable of producing. These objects may be attained by superior general culture, and by special expedients. Perhaps I may best explain how, by stating the plan I intend to follow in endeavoring to improve our native Black Currant of this region, *Ribes floridum;* it appears to me a much finer species to begin with than the *R. nigrum* of Europe, the origin of the garden varieties: it has a neat habit of growth, bears abundant crops of tolerably well flavored fruit, and its blossoms are somewhat showy. My aim is to obtain a variety with flowers approaching the color of those of the Missouri Currant, *R. aureum*, and with fruit equal or superior in size and quality to that of the Black Naples. In raising plants or animals to be grown for profit, utility should never be sacrificed to mere show, but if we can combine the beautiful with the useful, it is well.

From several plants raised in the last year, I shall select three which have the cleanest and strongest branches, and whose roots are well developed from the base of the cuttings. This I have found a matter of some importance; why it is so, I shall endeavor to explain in another letter on the Season for Transplanting. The next consideration is, where and how the trees should be planted so that the organs of vegetation may perform their functions in the most efficient manner. A soil moderately rich, and free from stagnant water, should be selected, and a hole dug for each plant about six inches deep, and wide enough to admit the roots being laid out their full length; the small lateral fibres, as well as the main roots, should be spread, as the greater the space covered, the greater will be the means of the plant for obtaining food from the soil. It may be well to cover the roots slightly with earth, as contact with manure sometimes produces canker. The hole may then be filled up with a compost formed of decayed turf, well rotted stable manure, and charcoal, this being calculated to produce a steady and vigorous, but not over luxuriant growth. Abundance of food will avail but little if the plant has not the means of digesting it. By the action of light on leaves, the crude sap undergoes certain chemical changes which fit it for the nourishment of new parts; the trees should not, therefore, be shaded by others, but fully exposed to light. Circumstances which may tend to render the leaves less efficient, should also be avoided or prevented—such as a situation exposed to boisterous winds, and the attack of insects. If a favorable time should be chosen for transplanting, the trees may attempt to bear fruit the first season; all the blossoms should, however, be removed, so that the energies of the plant may be directed solely to the extension of its feeding organs. The same sap, variously modified and combined, gives existence alike to the organs of vegetation and reproduction. By destroying the fruit of a young tree, a greater amount of sap is expended in the production of roots and branches; a greater

amount of organised sap will also be deposited in the tissue of the wood, than if the tree had borne fruit; this will give rise in the following spring, to vigorous branches and well developed leaves; it will also contribute directly to the growth of the fruit. Early in spring, the plants should be top-dressed with a compost as above. Numerous blossoms will now be produced, all of which should be destroyed, excepting about four or six bunches. By reducing the quantity of fruit, we increase the size and improve the quality of that left; a fact well understood and turned to account by some cultivators, but not, I fear, sufficently understood or practiced generally. When the fruit is set, if the weather should prove dry, liquid manure may be applied with advantage; one part of pigeons' or fowls' dung, with three or four parts of water, is a powerful and prompt fertiliser; after being mixed it should be allowed to settle, and the clear liquid used. This watering should be continued more or less, according to the nature of the season, till the fruit shows signs of ripening—water should then be withheld, or the quality of the fruit may be injured. Fruit of the best quality being always obtained when the latter part of the summer is dry and sunny. The growing points of the young shoots may now be nipped off, with a view to add still farther to the size and quality of the fruit When the berries are ripe, the seeds should be washed free from pulp in milk-warm water—dried on paper, and suspended in cotton bags, in a dry room, till the time of sowing.

As soon as all danger from frost is past, the seeds may be sown thinly in rows, in a good light soil; when two years old, the trees may be transplanted to where they are to bear fruit, and they should be planted at such a distance apart, as that the foliage of one will not interfere with or shade that of another. If the branches are too crowded, some of the weakest may be cut clean out. The aim should be to have as great a breadth of foliage as possible to the light, with a view to hasten the period of fruit bearing.

By this mode of cross-breeding, different varieties of the pear or other fruits may be grown together, instead of a quarter of a mile apart. If trees are set out purposely for cross-breeding, no blossoms should be allowed to perfect their pollen; all should be early destroyed, excepting those to be operated upon. It is not, however, absolutely necessary, though advisable, to plant trees specially for this purpose. A healthy young tree, already in full bearing, may be used; it should be suffered to bear only a very moderate crop of fruit the year preceding the experiment. A branch may then be selected on the south side, all the flowers on the branch to be destroyed, excepting those to be cross-fertilised; these I would enclose in net or gause bags, to protect them from insects, and possibly from the ingress of adventitious pollen. When the fruit is set, it should be again well thinned all over the tree, and such other means resorted to as seem best calculated to add to the size and quality of the fruit.

There is a tendency in the seedlings of all highly improved fruits to revert to the original condition of the species, which can only be prevented by judicious selection and crossing, combined with high culture; comparatively few varieties deserving permanent culture will be obtained, even with the best management—but the chances will evidently be much in his favor, who diligently avails himself of those means which the practice of the most enlightened cultivators, founded on a knowledge of the functions of the various parts of plants, has proved to be successful.

I noticed that two correspondents were boasting of the number of good varieties of peaches and pears which had been raised in the states, compared with the quantity of seedlings grown. I suspect that much of the credit of this is due to the climate, and that in our endeavors to improve many kinds of fruit, we shall have an advantage over most European nations, especially over England and Germany, where cross-breeding fruits has hitherto

been most practiced. A given species of plant requires a certain range of temperature, and a certain amount of light, to enable it to grow in a healthy condition, or yield fruit of the greatest excellence; an excess or deficiency of heat and light, being alike injurious.

The gooseberry, strawberry, apple, and perhaps the cherry, are perfectly at home in England; they are grown there in great perfection, and there many valuable varieties have originated. But the pear, generally, seems to require a somewhat higher temperature. Several of the fine Flemish varieties do not ripen well on standards in ordinary seasons, and fruit from a wall, though large and handsome, is never so highly flavored as that ripened on a standard. Peaches, again, grown in England at great expense, chiefly under glass, and with artificial heat, are poor and insipid, compared with the delicious fruit which may be had so cheaply in New-York. If, therefore, it is a matter of so much importance that the fruit we wish to save seed from, should be made to acquire a high degree of excellence, it is apparent that in several of the states at least, ordinary culture will afford peaches far superior to any that could be raised in England by the most skillful gardener. Our high summer temperature, and dry atmosphere, may be imitated, but the brilliant sunshine, the bright light, on which the quality of the fruit so much depends, is inimitable. This should be a matter of great encouragement to the improvers of the more valuable kinds of fruit in this country—favored so much by climate, judicious selection and crossing, with improved culture, they can hardly fail to be otherwise than successful.

While on this subject, perhaps I may be permitted to quote from one of the letters I had the pleasure to receive from the late ANDREW KNIGHT, a few remarks respecting the kinds of fruit he considered yet capable of improvement.

After giving me a humorous account of an interview with a grower of large gooseberries in Cheshire, he says, "I lament that the improvers of the gooseberry did not in preference, select the Red Currant. Culture has always a tendency to render fruits less acid, and to some extent, more tasteless, and the currant, on that account, promised a wider extent of improvement than the gooseberry. I think it not very improbable that the Red Currant might be made by successive generations, and proper culture, a sweet, perhaps a very sweet fruit. The Green Gage Plum is the cultivated sloe. And I do not doubt that the pungently acid fruit of the Berberry might be changed into a very saccharine fruit. The apple and gooseberry alone, of our fruits, have, I think, been shown in the greatest state of perfection, nearly what they have the power of acquiring in the climate of England; and of the plum and common cherry, we have many, or more properly, several fine varieties. To the improvement of the Morello Cherry, a totally distinct species, no attention has been paid. With the pear, probably much may yet be done, but I fear the pear assumes its highest state of perfection in the warmer parts alone of England; as a fruit for the press, in such situations, I think it capable of affording a very fine wine fluid, far preferable to the wretched mixture often drank in England under the name of wine."

I have been glad to learn from the pages of this Journal, that many are now endeavoring to raise improved varieties of fruit. Gardening is allowed to be one of the most delightful amusements which can occupy the leisure hours of man—but pleasing as the ordinary culture of the plant may be, it is a tame and monotonous pursuit, compared with the pleasure to be derived from raising new kinds of perennial flowers or fruit from seed. The comparative uncertainty of the results of our experiments has its charms. In ordinary gardening, we know that the flowers and fruit of next summer will be like those of the summer that is past—differing it may be, a little, in beauty or flavor, as the season is propitious or otherwise; but from the moment a seedling springs from the ground, to the time

it produces its flowers or fruit, it is an object of great interest, and a source of much speculation to the experimenter; more mind is in the work, than in ordinary gardening—greater skill is required—more correct habits of observation, and a more intimate and extensive knowledge of cause and effect. And not only may the pursuit be recommended as a refined amusement, or for the pleasure it is capable of affording, but it may be recommended as a commercial speculation. There is, doubtless, ample room for improvement yet—more valuable varieties of fruit than any we now possess, will yet be obtained, and to say nothing of the pleasures of hope to be enjoyed by the way, there is a fair prospect of ultimately receiving an adequate return for the time and labor expended. Within twelve years from the time of proving the fruit, an improved variety might be introduced into every garden of the United States, and in a country where fruit growing is a matter of so much importance, it must be a source of gratification to the successful experimentalist, to be conscious, that even by his amusements he may have contributed to some extent, to the welfare of his country and fellow men. JOHN TOWNLEY.

*Port Hope, Columbia Co., Wis., Jan.*, 1851.

Many thanks to our new correspondent in Wisconsin. We recognise him as a well known cultivator, who has seen the best practice on the other side of the Atlantic, and shall be glad to hear from him again. ED.

## NEW MODE OF BATTLING THE PEACH-WORM.

BY J. C. WRIGHT, SCOTTSVILLE, VA.

A. J. DOWNING, Esq.—I noticed some time ago, in your book on Fruits and Fruit Trees of America, an article on the subject of planting fruit trees, in which you advise that the trees should be so set in the ground as to bring the upper roots on a line with the surface of the earth. I liked the suggestion much, and in setting out a number of young plums and peach trees, I adopted it. I have, however, suffered greatly from the destructive little grub which attacks the collar or root of peach and plum trees, and had tried various means which had occurred to me as remedies, such as unslacked or powdered lime, ashes, tobacco, hot lye, and pot-ash—all I found to be inefficient. Last may I gave my trees a thorough over hauling, or examination, and found an incalculable number of these grubs at their work of destruction and death about the collar and roots. I then tried another experiment, which I found to answer the purpose admirably, so far. It is as follows:

I commenced by removing the earth from around the roots, as is exhibited by the annexed figure, so as to form a circle round the tree, and make a basin of a foot in width, and four inches deep. I then procured a quantity of rock lime, and slacked it, reducing it to the consistency of very thick white-wash, and after letting it stand in this state for a day, I poured it into this basin, completely filling up the

interstices about the roots. In a short time this lime was formed into a hard crust, which served not only as an effectual *bar* to the entrance of the grub during the whole season, but what is almost equally important, I found last fall upon removing this lime from its bed, that the wounds, (and some of them were quite serious ones,) which I had inflicted on the base of the tree in removing the grubs, were healed up, and in as good and healthy condition as any part of the tree; and now my trees are in a more healthful and promising condition than they ever have been. This process of liming, however, should be renewed every spring.

I do not know whether this experiment of mine is original, but can confidently say that I never saw or heard of its having been tried before. But be this as it may, the information is before you, and if you think it will in any degree promote the interest of horticulture, it is at your service. Very respectfully your ob't serv't. J. C. WRIGHT.

*Scottsville, Albemarle Co., Va., 16th Dec.*, 1850.

A very good hint, and one which may be amplified and improved on. ED.

## DOMESTIC ANIMALS FOR PARKS AND PLEASURE GROUNDS.

BY L. F. ALLEN, BLACK ROCK, N. Y.

[The following article, on the same subject as the leader in our March number,—was written before our correspondent had seen that number—though it is an excellent continuation of the same idea. We are glad to have our notions of the advantages of introducing domestic animals into the ornamental park scenery of our country places, fortified by one of the most noted stock-breeders in the country, whose broad meadows on the Niagara river, give example for his and our precepts. ED.]

DEAR SIR—It is passing strange that a people so intelligent in most things appertaining to their own enjoyment, and so ambitious in the fitting up and arrangement of their country places, as the Americans, have thus far shown so little taste in collecting fine domestic animals about them, not only as creatures of convenience and economy in living, but as adding a beauty and effect to their summer homes, far more expressive than anything else which can be obtained, even at a much greater expense. In every populous part of the United States, and more particularly in the neighborhood of our large cities and towns, scattered far and wide, are seen imposing and costly houses, seated in large lawns and parks, planted out with noble trees, embellished with beautiful gardens, and expensive grounds, to say nothing of the various minor decorations, both of nature and of art, set up or planted at much cost, and cared for at a heavy annual charge upon the proprietor, merely as objects to gratify the taste, or to arrest the attention of the passer-by, to gaze at and admire. These, so far as they go, are all very well; but, contrary to what is usually supposed, they fall far short of *completing* a country establishment as it should be; a pantomime in the landscape; not *speaking* to the heart like the living action and the moving beauty of animal life, which would otherwise give effect and fulness to so much rural beauty and ornate embellishment, and make it just what it should be, the perfection of rural objects inartificially brought together, and filling up a complete picture.

In taking a summer drive through a neighborhood of the fine summer establishments out of our large cities, or on the banks of the Hudson or the Delaware, and observing the fastidious keeping of many of the parks and grounds about them, one would suppose that the land was not made to be grazed or trodden upon, even where worthless for any other

purpose, and that the presence of an animal to run at large in the enclosures, was a contamination of vulgarity not for a moment to be tolerated. All this, to one who appreciates the country in its true spirit, is false and artificial. An open common, with a humble cot or two upon its margin; the huge Oak or Elm along its border, the grazing cow, the scattering sheep; or

"The noisy geese that gabble o'er the pool,"

are more interesting objects in quickening the enjoyment of one who truly contemplates them, than a paradise full of such dull, unspeaking beauty.

Nor does this inattention to animate objects in most cases arise from a grudging of the expense of obtaining and keeping them, but from the want of a knowledge in what to get, and how to manage the creatures which are required for the purpose. A resident of the city, getting up a country place, where himself and family are to spend their summers, knows that he wants his horses. For them his stables are built and furnished, to all required extent and convenience. He knows, also, that he must have a cow or two to furnish the daily mik for the house; possibly a pig to put in the "pen," and eat the offals of the kitchen; and perhaps, a dozen hens to furnish the new laid eggs, so dear to all good housekeepers; with any quantity of dogs to guard the premises; and, though he does not think of it, to become an intolerable nuisance by their depredations among his neighbors. His horses—for he is, perhaps, a man of taste in that line—are good, and such as he takes pleasure in driving or riding after; and he likes, besides, to see his wife and children, and guests, well set up in their driving equipage; but for all the rest he knows or cares nothing.

His cow, which he knows simply as a thing that gives milk, and lives on grass, is probably driven in and sold to him by a cattle-jobber of the neighborhood, and more likely than not of the commonest description of brutes, and disgraceful to any piece of ground but the worst and most obscure lot on the farm. She is, therefore, driven out and kept in obscurity, and shows herself only to the stable-boy, who drives her up, milks, and kicks her out of sight again, as soon and as carelessly as possible. The pig and chickens are got to match, while the dogs, of "mongrel, puppy, whelp, and hound degree," run wild on the place, the only real "lords of misrule" on the domain.

Thus he has no domestic thing around him beyond his horses, or dogs, in the brute creation, which interests him. His meadows yield him only a scanty crop of hay for his horses, and his pastures run waste for want of creatures to crop them, or are gnawed to the ground by his neighbors' breachy cattle. He is, consequently, without anything to arrest his attention in the fields or grounds, and the overgrown grass in his lawn or park—for what is a country house without one or both?—must be weekly cut to keep it in good trim, and he becomes annoyed at the continual expense of keeping a hand or two to clip and rake a scanty coat of shrivelled herbage, or otherwise see it grow up rank and seedy on his ill kept grounds. And, what is the poor man to do? Why, as sensible men do, who have some natural fancy that way, and taste, and *economy*, and liberality enough to get something worth keeping, and ornament his grounds with beautiful, well-bred cattle or sheep. Deer, as in England, he cannot keep; and if he could, they are a creature of no profit. Neither will our American fences hold them, and they are destructive to every young thing of vegetable growth within reach.* But choice cattle and sheep he can get, which may be kept without trouble, and be a source of profit and pleasure. And premising that our friend, who is disposed to take some sensible advice, wishes to make a few inquiries as to what description of stock he wants, a hint or two will be given for his benefit.

* We cannot quite agree with our correspondent about the deer—unless his remarks apply to our wild deer. The deer of the English parks are perfectly tame, and as easily kept within bounds as any of our cattle. We do not see why they should not be imported into our parks, as well as Short-horns. Ed.

If he delight in a horse, and inclines to breed a colt or two, which may grow up on his farm and make a good family beast or a match of them, for his own riding or driving, let him get one or more fine young, healthy mares, as breeders, and turn them into the park. Let them be at least half-bred "turf horse" in blood. If three-fourths or seven-eights of that blood, all the better, if well selected. They will be great in "wind and bottom" for the road. A mare or two of such material, with each a colt at her foot, will be a beautiful and characteristic ornament to the grounds in summer, keep easily through the winter on the common "fodder" of the place, with a little grain, and grow up to profit and future usefulness. If he love cattle—and he has little business in the country if he does not—let him get, according to his area of ground, one, two, three, or more, well selected Short-horn, Devon, Ayrshire, or Alderney cows, as his soil and fancy may direct, and turn into his park; and if he have still more room, a dozen or two nice, well-bred South Down sheep, to graze after the cows, and give him choicer mutton than any he can find at the neighboring butchers, or even better than he can get out from the city.

If his soil be strong, and his pastures rich, he should take the Short-horns for his cows. They are the largest, most imposing and profitable of all others, where feed is abundant; will give "a bushel" of milk in a day, of the richest quality; and, scattered over his grounds, with their beautiful silky colors of white or red, or more usually, both intermingling in every variety of shade, present the most picturesque group imaginable, as they graze, or stand, or lie ruminating among the trees. If the soil be light, and the pasture shorter, let him adopt either the Devons, the Ayrshires, or the Alderneys. They are all good milkers, when properly selected, and for his governance I will describe them briefly.

The Devon is a medium sized animal, deer-like in its appearance, a full cherry red in color, with a clean delicate head, a high spreading horn, a clear prominent eye, and of perfect symmetry in figure; light, agile, and beautiful; she is docile, perfectly hardy, and easily kept.

The Ayrshire is the "dairy cow" of the Scotch lowlands; a great milker, an exceedingly pretty animal, of medium size, a deep to light red and white in color—the red largely predominating; a low, yet delicate horn; not so light and graceful as the Devon in figure, but of a most domestic, housekeeping appearance, and as useful and profitable a creature as lives.

The Alderney, Jersey, or Gurnsey cow, for she is called all these names—is *the* cow of the English islands on the coast of France. She is largely kept on the Isle of Wight, and in Hampshire and other southern counties of England, by the gentry, for her rich and creamy milk, and delicious butter. She is small in stature, meek and somewhat inferior in appearance, a "crumpled" horn, red and white in color, quiet in temper, usually low in flesh, and requires good feeding to keep her in condition when in milk, and at no time presents that beautiful and imposing appearance of the other breeds. But her usefulness is unsurpassed; and a herd of Alderneys grazing in a pasture, or park, or a paddock, are a pretty sight to look upon.

Either of the above varieties of cow are profitable, as well as ornamental animals to the park or pleasure grounds; and when selected with an eye to their milking qualities, in which they usually excel, none others can equal them. Their value, according to blood and quality, with the breeders, is from $100 to $250 each, but those wanting them for milking qualities alone, and not requiring those choice and high traits of "blood," to which professional breeders attach so much value, may readily obtain them at prices varying from $75 to $150; and many of them, for milking alone, are worth either sum named, better than a common cow is worth her usual price in market

The South Down sheep is a good sized animal, with a snug, compact fleece of medium quality; a black or dark brown face; robust in its figure, and of exceeding ripeness of points. It is emphatically the "mutton sheep" of England, with a dark, venison colored flesh, arriving at early maturity, and giving a "saddle" and "chop" equaled by no other sheep among us. They are exceedingly gentle and quiet in their habits, hardy in constitution, prolific, and easily kept, either in a lean pasture, or in the straw yard. Their value, thorough bred, ranges from $10 to $20.

If a lake, a pond, or running stream lie within the park, the large African, or the White or Brown China, or the Bremen Goose, is a most ornamental, as well as useful water fowl. The African or China, has the long arched neck, and all the grace and beauty of the Swan, and their cry at a distance, is really musical. They are fine and delicate in their flesh, very domestic, and in all but our most northerly climates, quite hardy. They are, with abundance of water, a decided ornament to the pleasure grounds.

There are many spacious grounds and extensive farms in several of our states, where fine herds and flocks of some of the varieties of cattle and sheep described, are kept and bred in great purity, and easily accessible to those who desire them. No well managed country establishment, either of the professional farmer or amateur, can be complete without a specimen of some one breed of choice animals upon it; and when we in America, shall have learned the true art of country life as they understand it in England, no place of any pretension will be found which shall not embrace more or less of these fine varieties of stock within its enclosures, as giving character, finish and effect, to its appointments.

My remarks on this subject, may, I am aware, be thought to "smell of the shop;" but convinced, as I am, that in the United States we are most lamentably behind the times in this important appendage to our country establishments; and referring to a recent conversation with you on this subject, I thus "give tongue" to my thoughts. And I will only add my entire conviction that he who seeks one of the highest enjoyments of country life, can do no better than to cultivate a taste, both in himself and in his family, for the appreciation of fine domestic animals, in which they will find some of their purest and least expensive pleasures. It is so with many who from entire indifference, have become enthusiasts in their love of them; and for myself—though it be egotism to say it—in my own island park of some hundreds of acres, I find no serener pleasure than with my honest shepherd dog at my side, to stroll out among my Short-horns, my Devons, and my South Downs, and amid the summer beauty of woods, and grass, and waters, to call them around me in their joyous fulness, and commune with their gentle natures as one entrusted by a kind Providence with the care of his subordinate creatures, and whose bounty in their beautiful creation, it would be guilt in me to neglect. LEWIS F. ALLEN.

*Black Rock, N. Y., Feb.*, 1851.

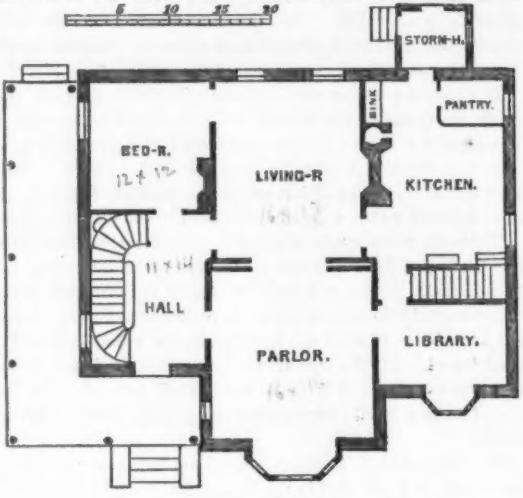
## FREESTONE COTTAGE AT MIDDLETOWN, CONN.

(SEE FRONTISPIECE.)

DEAR SIR—As your journal is in part devoted to the progress of rural architecture, I venture to send you the engravings of a beautiful cottage erected in this place by Mr. D. BARNES—which is not only tastefully designed, but one of the best built residences in the state.

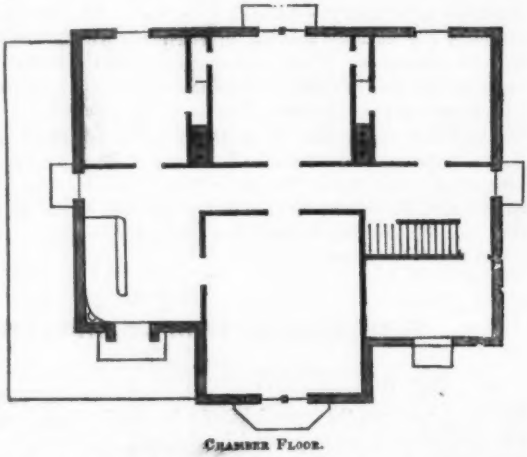
The house stands on the west side of High-street, which is lined on both sides with a variety of beautiful shade trees in double rows, and is emphatically *the* street of the city.

Preparations are making by a gentleman of ability and taste, for erecting a splendid mansion the ensuing season, on a beautiful lot a few rods to the north. Directly in front of the cottage on the opposite side of the street, between the fine residences, lies a little forest of evergreens, ornamental trees, &c.; while on the south, are the beautiful grounds, crowded with the richest variety of trees, shrubbery and flowers, which surround the fine residence of the late RICHARD ALSOP, Esq.




PRINCIPAL FLOOR.

The cottage stands back 100 feet from the street, on a lot having a front of 210 feet, the lines of which extend so far back of the house as to contain two acres, which is well stocked with trees of the choicest varieties from the various nurseries of the country, mostly selected and planted by the proprietor himself. They were planted 2 and 3 years since, in the richest soil, and with extra care; and their unexampled growth has well repaid all the labor and attention bestowed on them.



CHAMBER FLOOR.

Seen from the street, the proportions of the cottage are very pleasing. The length of the building (exclusive of veranda) is 43¼ feet, breadth 39¼ feet. The basement is divided by brick walls into a vegetable cellar under the south part, a large front cellar, which makes a cool dining room in the summer months, with an apartment in the rear of it for a furnace, coal, &c. The north part is divided into a bathing room and cistern on the east; a kitchen, provided with a cooking range and cistern on the west, and between them, sunk deep in the earth beneath the stone stair-way, is a cold cellar for the purpose of keeping butter, &c. The whole cel-

lar is paved with choice large flagging of the best quality, and laid in water-proof cement, so as to be dry in all seasons. The walls are laid five feet below ground, two and a half feet above. The courses are of single stones, those at the bottom weighing half a ton or more, each. The upper course, two and a half feet above ground, is of single stones, each weighing nearly a ton, hewn and polished in the best manner. Their size may be inferred from the fact, that five only are required to extend from corner to corner across one end of the building, a distance of 31 feet 8 inches. On this course is the water table, which, like the courses below, is laid in cement and lime-mortar, thus effectually preventing any dampness from arising from the walls under it. Above the water table, the stones of the main walls are each one foot wide and thick, by various lengths from two to twelve feet, according to the place they occupy, each stone having been cut and marked for its place. Twelve courses of one foot each, complete the first story, on which is laid a belting course which passes entirely around the building. Above this belt the walls are not so thick, being set back one inch from a line perpendicular with the walls below. The entire walls are laid with the closest possible joints, in a fine grout of lime-mortar and cement, with an outer edge of stone putty, which has hardened like the stone itself, and is perfectly impervious to the weather. All the stones which form the corners are cut in the shape of the letter L, thus locking them together with great strength. Wherever beauty or strength seemed to require it, single blocks of a large size have been used. The arches of the pointed windows are cut from single blocks. The whole of the projection in the second story, over the front entrance, is composed of four pieces, the sill, the sides and the arched top. From this window, as indeed from all the front windows, the view of the city, of the windings of the river, of Portland, and the Strait hills in the distance, is unsurpassed.

The timber, joists, &c., are of first quality chestnut; the joists large, and thickly placed. The floors are of well seasoned lumber, closely laid; the principal one is of one and a quarter inch narrow cypress plank. The roof is covered with first quality shingles, dipped in boiling oil and whiting. They were selected and cut in a semi-circular form, so as to lay like the scales of a fish. All the first floor rooms are wainscoted three and a half feet high. The doors are of black walnut, two inches thick, with mahogany panels. All the wood-work of the first story corresponds with the outward style of the building, the paneling of the doors, wainscoting, casements, &c., being finished with the trefoil or quatrefoil mouldings. No unseasoned or second quality of lumber has been used in the building, and the builder, Mr. E. Rockwell of Middletown, has shown himself a most accomplished *joiner*.

The design for the ornamental tracery at the gables is original. It is a vine running upward to the peak, with carved leaves and clusters. All the hangings for the doors and windows, and other trimmings, are of the best quality.

The labor has not been done by the job, but by thorough craftsmen who understood their business, and were paid the wages such men are entitled to; and there has been, probably, less waste of material than is common in the erection of buildings of half its value.

This cottage is not yet entirely completed, but will probably be finished in a couple of months. The proprietor, Mr. Barnes, I understand, will then offer it for sale to any person whose taste and means would lead him to desire so charming a residence, in one of the most healthful and beautiful towns in New-England. Yours, A Subscriber.

*Middletown, Ct., Jan., 1851.*

# AN ARTICLE ON BEES.

BY H. K. O., LAWRENCE, MASS.

Mr. Downing—Your bee correspondent may be assured from my "experience," of the fact that a queen bee has been produced from a worker's egg. I use the common phraseology. The working bees are barren females; the queen the only fertile bee of the hive. If she be lost, or dies, and there be worms [larva] of some three or four days old, which, under ordinary circumstances, would become workers and barren, the bees select one, and by some treatment which no one has yet satisfactorily explained, so develop its organs as to render them generative—and such bee becomes the mother and queen, so called.

The subject is full of difficulties. For not only is the generative power of such bee changed—but her shape, length of body, and sting. The various writers on the subject greatly disagree. Let me refer to "Bevan on the Honey Bee," and "Huish on Bees," and "Miner on Bees and Hives." In these works the subject is fully treated. The probability is, that, as in most contested cases, the truth lies between the parties, and not wholly on one side.

Some years since, in a single combed hive made for the purpose, an apiarian friend and myself witnessed the experiment. The queen of the swarm, from the nature of the hive, could easily be seen at any time. She was killed by a stab with a long knitting needle. In the course of a few hours the bees were found in great commotion, and continued so for most of the day. When quiet, it was found that a small knot of bees was clustered round a spot near the center of the comb,—and here they continued, till at the end of about fourteen days a queen was seen to emerge from the cell at which they had operated. Whether the worm was a worm, which, if let alone, and no queen were wanted, would have produced a worker, or whether it was a queen-worm, and which, (whether a queen were wanted or not,) would have been a queen, I leave to the theorists to settle. Of the fact that a queen was had, your correspondent may be assured.

To his second query, I cannot reply practically, but should by all means recommend the parting of the hive, and the removal of one of the parts to at least a mile's distance.

To his third query, I reply that the bees in that part of the hive which contains the queen, will, (whether it be the part carried off or the part remaining at home,) be quiet and easy, and keep about their regular business; while the bees in the part which has not the queen, will soon become troubled and uneasy, and begin to run about and travel over the combs in great agitation, as if in search of the queen. This they will do for some hours, until they settle down under the necessity of the case, and get to work on the process of procuring their new queen.

Your correspondent appears to keep his bees in a city; now, although I have known bees to do pretty well in town, they do much better in the country. The temptations of the town lead many bees, as well as many bipeds, into dangerous and deadly places. In the early and warm spring, before the honey-yielding flowers have blossomed, and in the late summer, after they have withered,—the sweet odors of the confectionary shops, of the sugar and molasses stores, allure the industrious wanderers, and they, improvident against the danger, and supposing that they can get out of the door or the window, or escape from the sugar box or molasses cask, as easily as from the petals of a flower, are unhappily made prisoners,and perish by thousands. "God made the country and man made

the town," and all the works and places which bear impress of the Deity, are far better for bees as well as for bipeds.

"Rura mihi placent ante omnia"—
The country, the country is the right place for me,
The fields and the woods for the sweet sucking bee.

Still, if it be his misfortune to be tied down to brick and mortar, and a pavemented town, he had better resort to the "non-swarming hives," and depend for the increase of his stock upon some farmer out of town. My limits, or rather your limits, will not permit the space for the details, or I could give a description of one which I have used for years, without its swarming, and have had an annual produce of honey of from fifty to eighty pounds, without destroying a bee. [We shall be glad to have this description. Ed.] Yours, H. K. O.

*Lawrence, Mass., Feb.* 14, 1851.

## THE PYRAMIDAL PEAR TREES,

### IN THE GARDEN OF PLANTS.

The most beautiful sight, in the way of hardy fruit tree culture, that greeted our eyes last season, in Europe, was that of the Pyramidal Pear Trees in the *Jardin des Plantes*.

On one side of this great national garden, which, with its parterres, schools and museums, is a vast collection of all that is interesting in Natural History, is a piece of ground of perhaps an acre, somewhat away from the principal walks. It is separated from the rest of the garden, (to which the public has the freest access,) by an iron railing and a gate, which is kept locked. This is the "school of pears"—that is to say, the garden in which Monsieur Cappe, the head of the fruit department, has his house, and more especially his beautiful pear trees—to which he has given up almost the whole of the area allotted to him.

It was September when we were in this garden. We were weary with a day of sight-seeing, and a long ramble through the other different departments of the garden, and though very desirous of seeing M. Cappe's trees, which have become rather famous as fine specimens of the art of pruning, and had come provided with a note to him which would open the iron gate where the trees of knowledge stood—we had almost determined before we reached it, that we would be content with a passing glance from the outside, at what we supposed would present a familiar appearance to our eyes.

But a passing glance through the iron railing soon made us feel that M. Cappe was not a man to be neglected. And patiently we waited till one of the garcons had found him and delivered our note, in order that we might enter the now unclosed gate, and make the acquaintance of the master of pear trees.

We do not wish to depreciate the magnificent pictures in the Louvre, but we must still be allowed to say, that *in their way*, M. Cappe's pear trees are as well worth seeing as any of the great master-pieces of art there. Nobody (with a soul) would think of comparing a Poussin with a pear tree, yet what one of Poussin's grand sylvan landscapes, (in which you can almost feel the tempest that sways the tops,) is to a landscape on a sign-board, M. Cappe's pyramidal pear trees are to the pear trees of common gardens, both in England and America.

Our readers must imagine a level plot of ground, marked off into beds or borders, about ten feet wide, with a narrow alley between. In a straight line in the middle of these beds

stand the pear trees—about ten feet distant from each other. And such pear trees! so symmetrically shaped, forming perfect pyramids of foliage in the finest tapering lines from top to bottom; so healthy and luxuriant, with not a leaf nor branch wanting, and with the utmost possible vigor and beauty of growth, as if not "nice art" had educated them into this shape, but rather they had grown so because it was their nature, and they could not help it; and so laden all over with the finest and fairest fruit—golden, orange, dark bronze red, or tinted with the ruddiest tints of autumn; in short, so altogther the complete and perfect thing as garden pear trees, that we strongly suspect that good MONSIEUR CAPPE has a better understanding with mistress Pomona, than any of us, her Anglo devotees.

*Cappe's Pyramidal Pear Tree.*

We had a very interesting chat with M. CAPPE about the management of his trees, which we shall give the substance of for the benefit of our readers. We may say, in the first place, that the climate of Paris is so much like our own, that any lesson in open air culture learned there, is worth twice as much as if learned in England. In fact, the pear tree grows but indifferently as an open standard in many parts of England—while M. CAPPE'S trees, almost all of them, had made shoots at the ends of the branches, on all sides, about two feet in length. They had been planted from 10 to 18 years, and were from a dozen to eighteen feet high. None of them were on quince stocks—though Mr. C. admitted the value of the stocks for particular varieties. Neither does he practice root-pruning, but rather smiled at our account of the importance attached to it in England by some of the best cultivators—saying "it is all very well for a cold, moist country—but neither you nor us need it." His pear trees are all worked on pear stocks. They are planted in a good mellow loam—simply trenched two and a half feet deep, and well manured. The trees, as we have said, are planted in borders. These borders are about eight feet wide, and when they are loosened in the spring, the whole top of the border is formed into a hollow, shaped like a shallow pan, two or three inches deep. Over the surface of this is spread a mulching, an inch deep, of decomposed barn-yard manure—which not only shades and keeps the soil cool, but every time the rain falls and fills the basin containing this dressing or mulching of manure, it carries down to the roots their best food. It will be remembered that the soil of Paris is calcareous, and there is, probably, no lack of lime for the growth of the pear.

So much for general culture. Now a word as to *pruning*, which is the great point in which the French excel us—it being in short, the *education* of the tree. "Just as the twig is bent the tree's inclined."

M. CAPPE'S method of pruning, which he was good enough to explain to us very clearly, is simple, and easily understood. Perhaps we should say it is easily explained with the knife in hand, and the tree before one. But as our thousands of readers are not within such convenient reach of the eye, we must do the best we can to make it clear by words.

M. CAPPE confines his pruning to three seasons of the year. In the month of March, or before the buds start, he shortens back with the knife all the leading shoots, fig. 2, *a. a.*—that is, the terminal shoots at the end of each side branch. Of course, this forces out not only a new leading shoot at the end of the branch, but side shoots, *b*, *b*, at various places on

the lower part of the shoot. These side shoots are left to grow till the *end of May*. They have then pushed out to about four or five inches in length. The ends of all these side shoots are then *pinched off*, leaving only about an inch and a half at the bottom of the shoot.

Fig. 2.

Fig. 3. shows one of the branches, with the side shoots, as they are at the end of June. The dotted lines, *b*, *b*, show the point to which these shoots should be pinched off.

The terminal or leading shoot, *c*, is left entire, in order to draw up the sap, which would otherwise force all the side shoots into new growth. Notwithstanding this precaution, in luxuriant seasons the side shoots will frequently push out new shoots again, just below where they were pinched. This being the case, about *the last* of August M. Cappe shortens back these new side shoots to about an inch and a half. But this time he does not pinch them off. He *breaks* them, and leaves the broken end for several days attached and hanging down, so that the flow of sap is not so suddenly checked as when the branch is pinched or cut off—and the danger of new shoots being forced out a third time is thereby effectually guarded against.

The object of this stopping the side branches, is to accumulate the sap, or, more properly, the organizable matter in these shortened branches, by which means the remaining buds become fruit-buds instead of wood-buds. They also become spurs, distributed over the whole tree, which bear regularly year after year—sending out new side shoots, which are pinched back in the same manner every summer.

Fig. 3.

In order to keep the tree finely proportioned, the eye of the pruner must be a nice one, that he may, with a glance, regulate the pruning of the terminal branches or leaders, which, as we have just said, are shortened back in March—for then is the time to adjust any extravagancies of growth which the tree may have run into, on either side: and in the summer pinching the balance of growth is adjusted by pinching the side shoots that start out nearest the ends of the branches, quite short, say an inch and a half, while those that start near the bottom of the branch, (or the center of the tree,) where they have less nourishment, are left from four to five inches long.

Understanding this mode of pruning, nothing is easier than to form pyramidal pear trees of the most perfect symmetry, and beauty of form. But in order to have the branches regularly produced from the ground to the summit, you must plant a tree which is only a couple of feet high, so that you can form the first tier of branches quite near the ground, by cutting back the leader at the very outset—for if the tree is once allowed to form a clean body or stem, of course it is impossible afterwards to give it the requisite shape and fullness of branches at the bottom.

Our readers will see that we are not giving this account for the benefit of our orchardists. It is a refinement in horticulture which belongs to the fruit garden—but which well repays the amateur or practical gardener, both by the increased fruitfulness and beauty of the trees. From the especially healthy condition of the trees in the *Jardin des Plantes*, as well as from other analogous instances, we are led to believe that by the fine clothing of foliage which protects the bark of the trunk and branches from the violence of the sun, these pyramidal trees will be found less liable to many diseases that attack the pear tree

in climates like France and the United States, than when the trunks of the trees are fully exposed to the sun.

Most of the finer sorts of pears were in full bearing when we saw M. CAPPE's trees. Beurre d'Anjou, White Doyenne, Seckel, Beurre Bosc, were among the finest specimens of fruit. Bonne des Zees was very highly rated by M. CAPPE. Colmar d'Aremberg was very large and good. Louise Bon d'Avranches—(quite distinct from Louise B. de Jersey, with which it is often confounded, and they are growing side-by-side here,) had heavy crops of fruit. And Belle Alliance, an exceedingly beautiful pear, of large size, pyriform shape, in color a rich orange yellow, with a crimson cheek, and of very good quality, was one of the finest sights upon the tree that we remember to have seen in a fruit garden—so abundantly did it load the trees, and so superb was the color of the pears.

## THE POMOLOGICAL CONGRESS AT CINCINNATI.

BY BENJ. HODGE, BUFFALO

DEAR SIR—The American Pomological Congress met at Cincinnati in the month of October last, and I am aware that much disappointment has already been expressed at the non-appearance of its proceedings. It is an old proverb "that large bodies move slow;" but patience, gentlemen—and these proceedings will yet come to light. But is it not very desirable, that for the future we "turn over a new leaf" in this matter, and hereafter take the publishing of the proceedings into our own hands?

The facts were these. The Cincinnati Horticultural Society had procured a room for the use of the Pomological Congress. Here our preliminary meetings were held. Dr. BRINCKLE of Philadelphia, was unanimously elected president. The middle and western states were well represented, but no delegates from any of the eastern states appeared. Soon after the President took the chair, a resolution was offered that the future meetings of the Congress be held on the show-grounds, in connection with the Ohio State Agricultural Society. It was also stated that a tent had been provided for our use, and that the Ohio State Board of Agriculture would be at the expense of publishing our proceedings. This called forth a most animated debate. The show-grounds were about three miles from the city, and, of course, we could hold no evening sessions. Yet the promise of our proceedings being published without expense to the Congress, seemed to carry us by the turning point, and the resolution was adopted by a small majority. Three sessions were held on the ground; but the noise and confusion incident to the place, prevented as much being accomplished as would have been, had the meetings been held in the city. A stenographer was present, who took notes of our whole proceedings, debates, &c., and no doubt, in the course of a few months, the proceedings will be published.

Now, it is not my object in this communication, to find fault with any man, or any set of men, in regard to this matter; but I ask, would it not be far better for the American Pomological Congress to attend to their own matters, and at all times to stand disconnected from that of any other society whatever? There is, perhaps, no objection to holding our meetings at the same time and place of the meetings of any other societies; and, as horticulturists, let us do all we can for the furtherance of agricultural and other kindred societies. But for the future, let the Congress take the responsibility of publishing its own proceedings. A few dollars from each member would pay all the expense. It has also been suggested, that our Horticultural Journals publish the whole proceedings in their pa-

pers by installments. This would be a good move, and there is little doubt but it would add to their subscription list.

While at Cincinnati, we had the pleasure of examining many varieties of fruits, which, comparatively, are but little known in the more northern states. Prominent among these, are the Cooper Apple and the Rome Beauty. Both of these apples are of the largest size, and there esteemed as fine autumn fruits; productive, and very valuable. Of the last named variety, one individual exhibited a barrel. They were of mammoth size, rivaling all others. A long debate arose upon the Cooper Apple, and some of our good friends pronounced it "second rate," "coarse and spongy." This called forth the grit of the good "Buckeyes," and they carried it up to the mark most manfully. Finally, it passed as "a fruit of fair promise." There is not a question but that these are very valuable varieties for the south part of Ohio. They are there cultivated largely for market purposes. The Cooper is a late autumn apple, and probably, farther north, will prove to be a winter fruit, as we were informed that there, the Rhode-Island Greening and Cooper ripened about the same time.

Pryor's Red Apple is esteemed very highly; and that worthy old pioneer horticulturist, JAMES ALLEN, Esq., of Louisville, Kentucky, assures me, in some notes on western fruits, "that the Pryor Red has no superior, and but few equals." Have any of our eastern friends fruited this variety?

Rawle's Jennet, and Kaighn's Spitzenburgh, were also found there in numerous collections, and also highly valued. All these are winter varieties. The last named variety very much resembles the Pownal Spitzenburgh.

The Belmont—of this variety there were numerous specimens, mostly from the more northern parts of the state. It is one of the most beautiful apples in the world. In flavor it may be classed as "very good." I would remark, by the way, that some beautiful specimens of the Belmont, and of many other choice fruits, were exhibited by Mr. KELLY, of Kelly's Island, in Lake Erie. These attracted great attention. More beautiful specimens of fruit I never saw. So bright, clear, and free from all spots or blemish. Are the islands in our lakes and rivers, any better adapted to growing fruits than other places?

Putnam Russet. It is now pretty generally conceded that this, and the Boston or Roxbury Russet, are one and the same fruit. Mr. PUTNAM of Ohio, a descendant of the old orthodox stock, (wolf-killing memory,) was also a member of the fruit committee, and gave us the genealogy of the Putnam Russet—and says Roxbury was its native place. This fruit was exhibited in numerous collections, generally marked "Putnam Russet." Many of the apples were very large, and grown out of the usual form—no doubt true to name, but with a little extra touch of the Buckeye, growing rampant and large.

Surprise, Yellow Injestrie, and Pennock, were found in many collections. The two first named we had proposed to add to the list of "rejected apples." On inquiry, however, we learned that many esteemed them very highly, and that any such move would meet with the most decided opposition. The specimens of Yellow Injestrie were truly beautiful.

It is really worth taking a tour to Cincinnati, to look into the fine vineyards there. Our old friend, N. LONGWORTH, Esq., has about ninety acres devoted to the culture of the vine. And we were informed from reliable authority, that within a few miles of Cincinnati, there are near one thousand acres of land devoted to the growing of the grape. The Catawba seems to be almost the only grape successfully cultivated in the open air. In most of the vineyards, this is the only variety devoted to wine culture. The soil, which

is a clay loam, perhaps somewhat mixed with marl, seems to be admirably adapted to the growth of the grape. The Catawba is much more palatable than the Isabella, and for wine is far superior. Large quantities of wine are made from these vineyards. Wines of various brands—I had almost said "foreign and domestic," Champaign, &c—at all events, numerous brands, some of them in imitation of foreign wines.

The iron green-house of Mr. RESOR, (iron instead of wood,) is a most admirable structure. Had that old incog., "JEFFRIES," been there, he must have admired it, and repented of his strictures on this beautiful edifice. Here were exhibited to us some of the most beautiful specimens of the Black Hamburgh grape I ever saw—very large bunches, and of "most delicious flavor," as we all could well attest without the aid of proxy.

While at Cincinnati, we must needs wend our way up to Mount Adams—there to spend an hour in star-gazing through the monster telescope, the largest but one on the continent of America. On the whole, we were well pleased with our visit at Cincinnati. We had the pleasure of visiting many fine gardens, green-houses, vineyards, &c.; and also of becoming much better acquainted with many of our western horticultural friends; and their kind attention to strangers from abroad, contributed not a little to the pleasure of our visit to the Queen City of the West.

B. HODGE.

*Buffalo Nursery, Feb.*, 1851.

## Foreign and Miscellaneous Notices.

LARGE ROSE TREES.—I have often heard amateurs, when admiring some of the large specimens in the nurseries here, express astonishment at their prodigious size, which they attribute to their great age, and good soil. But it must be told, that the system of pruning has as much to do in this matter as the age of the trees, or the soil in which they grow. The oldest of the large trees here cannot number more than twelve years, though there are others much older, not half the size. Often have I seen rose trees full of shoots, nearly all proceeding from the base of the head, owing principally to close pruning. When the knife is applied, whether in autumn or in spring, the greater part must be removed, for there is not room enough for the whole to be developed. Now, it is not the production of a large number of branches I consider injurious: if the tree is in a healthy and vigorous condition, this is natural and advantageous. But why should they not be obtained in such positions that they may be of permanent benefit to the plant—be made to extend its size, and render less thinning necessary? This may be done. Two years ago, after having pruned a number of large specimens, in which I had observed this error, I watched for the bursting of the buds, with the view of practicing disbudding. When they had shot forth about half an inch, I took a knife with a sharp point and commenced my search at the heart of the tree. From here I rubbed off, close to the bark, a great number of buds, leaving only such as, from their position, promised to increase the size or improve the contour of the head. If a bud was pushing where there was a gap, such was left; the others were thinned, leaving those which took a lateral and outward course of growth. Proceeding upwards, I cleared the center of the tree pretty freely, leaving only just so many buds as seemed necessary to preserve it from becoming straggling. Towards the top, and circumference, also, the buds, where crowded, or likely to cross each other, were removed. A month after the first looking over, fresh buds had broken, and thus was opened a prospect of more gaps being filled, the outlines of the heads being still improved, and their size extended. They were looked over again and again, and the same plan followed out. The growth was, in consequence, more vigorous than that of the previous year, and the flowers fine. On the fall of the leaf in autumn, the succeeding course of action was apparent. The trees were pruned as usual, and there was little mind exercised in the operation—little thinning required—no necessity to look at the tree for some minutes before one could determine where to begin; which, in my early attempts, I must confess, I have often done, owing to the interminable interlacings of the shoots. The second and third year the same plan was followed, and the trees are now of handsome form, large and healthy, producing an abundance of good flowers. It should be stated that the first year they were taken in hand, they were watered once a week, for two months, with liquid manure,

The sole reason for this was, that the soil in which they grew had become impoverished. We apply the plan of disbudding to pillar and weeping roses, as to others, by rubbing out any buds that may appear disadvantageously situated. In the youngest stage of the tree, the buds left to produce flowers and flowering shoots for the subsequent year, should stand about six inches apart on the main branches; intermediate buds should be rubbed out. The laterals produced in after stages, may also be disbudded; but masses of flower being the object sought here, the practice should not be too freely resorted to. A few words on summer pruning or thinning seem called for. If disbudding can be carried out, there is no need of summer thinning; but, if it cannot be, then the latter practice may be followed to advantage. So soon as the plants have done flowering look them carefully over, thin out the weak unhealthy shoots, and even some of the stout and healthy ones, where they approach each other too nearly: each shoot should stand free and exposed on every side. It is surprising to see how stout and firm the shoots become, and how the leaves increase in size after summer thinning. The summer kinds submitted to this treatment usually continue their growth by the elongation of the main shoots, the buds on the axils of the leaves remaining dormant; but, with the autumnals, the buds push forth the entire length of the shoots, and the second flowering is complete. The trees are improved in both cases, for the shoots grown at this period will produce the finest flowers in the subsequent season.—*Paul's Rose Garden.*

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Charcoal is an impure form of carbon, and is manufactured on a large scale for the purposes of the arts. The process of manufacture consists in exposing to heat billets of wood, or other organic matter, under such conditions as either wholly or partially to exclude the air. Charcoal has several properties which render it of value to the cultivator. As a manure, it does not act by furnishing carbon to the vegetation; because it is, in reality, one of the most indestructible substances known, and remains for an indefinite length of time without change. But it is remarkably absorptive of certain gases which it retains within its pores in a state of high condensation. A fragment of freshly burned charcoal condenses as much as ninety times its bulk of ammoniacal gas, and thirty-five times its volume of carbonic acid. As these two gases form the principal organic food of plants, it is obvious that charcoal may have a powerful individual action upon their growth. The experiments of Saussure and others, have shown that plants flourish with great luxuriance when the atmosphere in which they grow contains more than the usual amount of carbonic acid. Charcoal, after having absorbed carbonic acid and ammonia from the air, places plants under favorable conditions for receiving and appropriating a larger than usual amount of this organic food. The only difference is, that instead of entering the plant by the leaves, they reach it through the roots, which absorb the rain water containing these gases, washed out from the charcoal. Thus, charcoal, from its absorbtive nature, becomes an indirect means of increasing the supply of carbon and nitrogen to plants. Different kinds of charcoal have varying values in this respect. Experiments made by exposing freshly burned pieces of charcoal to the air, showed their different absorptive powers, by the increase in weight after they had been exposed a week to the atmosphere. The charcoal from fir gained 13 per cent. in weight; that from lignum vitæ, 9.6; that from box, 14; from beech, 16.3; from oak, 16.5; and from mahogany, 18. Charcoal also possesses the property of absorbing and retaining the odoriferous and coloring principles of most organic substances. It is, on this account, used for removing the putrefactive taint from foul water, or other putrid substances. When used as a filter for foul water, both the smell and color are removed. From this deodorising property charcoal is frequently mixed with night-soil, and other decaying manures, which it keeps free from smell, and at the same time aids in preserving, by absorbing the gases which would otherwise escape. A mixture of charcoal and burnt clay is frequently used for this purpose with excellent effect. Charcoal, when employed as a manure, acts, to a small extent, by presenting, in a soluble form, the ashes of the wood from which it was prepared; but this action is only temporary, and of small importance, when compared with its principal point of utility, viz: its power of absorbing from the air the gaseous food of plants; and therefore, of presenting it in a more condensed form, and in greater quantity.—*Professor Playfair, in Morton's Cyclopedia of Agriculture.*

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Dwarf Pinks of Verviers.—Liege and Verviers are the only two towns in Belgium in which the Pink, including all the different kinds and classes, is held in honor; and there are in these towns extensive and influential societies for the promotion of the culture and exhibition of this flower. Even at Brussels amateurs would scarcely believe that the growers belonging to the towns already named, can exhibit pots of Dwarf Pinks in which from 180 to 200 flowers may be counted; and yet nothing is more common in these localities where the cultivation of the Pink is established. We may easily perceive with what class of the population the cultivation of Dwarf Pinks is most in favor. If the Pink is not the flower of the rich, neither is it that of the poor. It has more of dignity and greater value; it is the flower of honest labor. At Liege, for instance, the most industrious and the most moral part of the population is that including the colliers. who are famous for the good management of their window gardens, which comprise, in a great measure, these Dwarf Pinks. The same observa-

tion applies to the artizans and mechanics of Verviers.

In a treatise published by Hoog [? Hogg,] in 1820, we find mentioned the double Dwarf Carnation of Liege, having the flowers sessile, or without much stem. There is also mentioned a Tree Pink, having an under-shrub-like form, growing from five to six feet high, and which was grown on a trellis against a wall. It appears evident that the Dwarf Pink was unknown before the 19th century; and it is not less clear that this interesting creation originated in Belgium. The Dwarf Pink is, indeed, a remarkable plant, and confined to the banks of the Vesdre and the Weay, two rivers of Verviers and Spa. All the dwarf varieties formerly belonged to the series known as bizarres, the petals being fringed: but at the present day it is the custom, at Verviers, to make all indistinctly dwarf. Thus we see dwarf bizarres, dwarf picotees, dwarf flakes, and so on.

There is, however, in cultivation, particularly in the trade, a race of Pinks having flowers smaller than those of the primitive species. They are generally rose purple, red, striated, or white; rarely yellow, or varied in the ground. These Dwarf Pinks would thus seem to claim kindred with the old bizarre, from which they are derived. At the recent exhibition of Pinks, held under the auspices of the Horticultural and Agricultural Society of Verviers, we had occasion to notice the excellent management which these Dwarf Pinks receive in that quarter. Of these, the productions of Messrs. L'Enfant were particularly deserving of notice. M. Barhon, also, had two specimens, the one having 184 flowers, and the other 178. These were indeed astonishing productions, combining all that is grateful in odor, elegant in form, and ornamental for the drawing-room conservatory.

The Dwarf Pinks of Verviers grow about four inches high: the stems are crowded with blossoms, the number of the flowers being very great; the corolla of a delicate rose color, with the variations. The aroma of these flowers is very agreeable, and nothing can be more suitable for the boudoir or parlor. To produce a specimen such as those alluded to, requires about three years of careful cultivation. These Dwarf Pinks are usually grown in pots, painted outside of a deep green color, and from five to six or seven inches wide at the rim. The most favorable aspect for them, if grown at a window, is that where they may have full exposure to the sun for the greater part of the day. The reflected warmth of the window-sills is also beneficial to their roots. The pots are not quite filled with soil, but to within about an inch of the rim; and, as the leaves extend, and cover the border or rim, a humid atmosphere is maintained around the stem or neck of the plants. [Abridged from *La Belgique Horticole*, a very interesting new periodical, edited by Prof. Morren, for *The Gardeners' Magazine of Botany*.]

THE PROPERTIES OF THE CARNATION.—*First.* The flower should be not less than two and a half inches across.

*Second.* The guard or lower petals, not less than six in number, must be broad, thick, and smooth on the outside, free from notch or serrature, and lap over each other sufficiently to form a circular roseate flower, the more round the outline the better.

*Third.* Each row of petals should be smaller than the row immediately under it; there should not be less than five or six rows of petals laid regularly, and the flower should rise and form a good bold centre or crown; and in quantity should form half a ball.

*Fourth.* The petals should be stiff, and slightly cupped.

*Fifth.* The ground should be pure snow-white, without specks of color.

*Sixth.* The stripes of color should be clear and distinct, not running into one another, nor confused, but dense, smooth at the edges of the stripes, and well defined.

*Seventh.* The colors must be bright and clear, whatever they may be; if there be two colors, the darker one cannot be too dark, or form too strong a contrast with the lighter. With scarlet the perfection would be a black; with pink there cannot be too deep a crimson; with lilac, or light purple, the second color cannot be too dark a purple.

*Eighth.* If the colors run into the white and tinge it, or the white is not pure, the fault is very great; and pouncy spots or specks are highly objectionable.

*Ninth.* The pod of the bloom should be long and large, to enable the flower to bloom without bursting it; but this is rare; they generally require to be tied about half way, and the upper part of the calyx opened down to the tie of each division; yet there are some which scarcely require any assistance, and this is a very estimable quality.—*Glenny's Properties of Flowers.*

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THE GREAT DISCOVERY IN VEGETATION.

All our readers may not have heard of Mr. RUSSELL COMSTOCK, and the fundamental secret of vegetable growth, which he claims to have discovered. As he is now before the Legislature of the State of New-York, asking for the "paltry sum" of $150,000, we feel bound to lay his statement, (which we copy from a newspaper published in the county on the Hudson where he lives,) before our readers.

"THE GREAT DISCOVERY.—Under the agricultural head, on the first page, will be found another appeal from Russell Comstock for legislative aid, to enable him to make known his great discovery in agriculture, which, he says, when universally understood, will be a great blessing to mankind.

If the advantages to be derived from it are as great as Mr. Comstock promises, we are sure the Legislature will no longer withhold from him the paltry sum of $150,000."—*Pough. Eagle*, Dec. 21, 1850.

"*Benefits obtainable from the Discovery in Vegetation. Experimented upon fourteen years.*

General Outlines relative to the discovered Natural Principle advantageous to Agriculture. See Bill No. 395, which was referred to a committee of five, who unanimously reported *complete*, April 6, and passed the Assembly yesterday. See Assembly Document No. 23, of 16 pages.

1st. That the discovery is a Law of Vegetation.

2d. That it will introduce the sweet potato and almost all other crops, into higher latitudes.

3d. That it forms a rule by which to cultivate.

4th. That plants cultivated according to it, will have a more robust constitution, will endure greater excess of drouth and rains; will be more uniformly productive; will be less liable to be preyed upon by insects.

5th. That it will introduce the best modes of cultivation, and perpetuate them.

6th. That by the discovery the common modes of cultivation can be demonstrated to be erroneous.

7th. That by it the comparative value of manures will be better tested and known.

8th. That by it the *annual* potato rot will be prevented. [☞ The recent occasional *excessive* rot is referred to in the appendix.]

9th. That when known it will be a national honor.

10th. That it being an idea or knowledge of a certain law in nature, and the practice not altogether new, although the objects to be obtained by the practice are new, it cannot be patented.

11th. That the copy-right laws cannot protect it. They protect words only.

12th. That the admitted best judge of Boston said, "It is one of the prettiest things in the world, because any one could use it and nobody know it."

13. That the discovered principle has 3 practical bearings on the cultivation of plants; and when comprehended commends the practice instantaneously.

N. B. That the laws of all *civilised society* are intended to protect their discoverers.

☞ *Three committees*, after knowing the secret, have *unanimously* recommended it to public patronage. RUSSELL COMSTOCK. *Albany, April* 10, 1850.

APPENDIX.

14th. That the sun will rise to morrow is a moral certainty, but the existence of this newly discovered principle in vegetation, can be demonstrated to a philosophical and mathematical certainty, as the discovery is founded on self-evident facts; a knowledge of which, from its nature and importance, should be one of the first lessons to be taught to a young agriculturist, in a state agricultural school or elsewhere; to the young lady who would rear her house plants successfully, as well as to all gardeners, and also worthy of the attention of all who value improvement in art and science, and in the condition of our species, *man*.

15th. That in the cultivation of all agricultural crops, a knowledge of the principle is essential, to know how to preserve the vitality and healthy growth of the plants.

16th. That the discoverer's system of cultivation is formed by a combination of discoveries.

17th. That he has discovered the cause of the excessive potato rot, and an economical and natural method of preventing it, almost to a moral certainty.

18th. That the bonus or reward of $150,000, which is suggested in said Assembly Document, No. 23, by eighty of the principal tax payers of the town of the discoverer's nativity and residence, and others of Dutchess county, when paid by the state, will be a powerful stimulus to cause all terra-culturists to test the existence of this discovered principle in nature experimentally; a practical knowledge of which will cause them to abandon their traditional mode of cultivation, and to adopt the improved system, which is in direct opposition to their traditional custom, and therefore may require (to be quickly introduced,) the most powerful stimulants, conviction, interest and popularity, to make the inroad on their custom.

19th. That the honor of the Republic demands legislative action on the subject without delay, even should the discoverer demand of the state the amount which he had encouragement to believe congress would appropriate eleven years since, say three quarters of a million, instead of this state's proportion of that amount, but he has never set any price.

20th. That the want of lobby-money, to cause honorable members of the legislative bodies to read all the proofs, may have been

the principal reason for the inactivity of Congress and the state legislature.

19th. That on the 22d ult. Hon. Dr. Peter Crispell, Jr., of Ulster county, who was chairman of New-York Assembly Committee on Agriculture, in 1849, stated to the discoverer, and Mr. Rutzer of the Poughkeepsie Hotel, and others, that this year, an unfavorable year for *Maize*, for the first time, he had grown more than 100 bushels of shelled Indian corn to the acre. When the discoverer explained the principle of his botanical discovery to the chairman, in Jan. 1849, Mr. Crispell told the discoverer that he thought the information worth —— dollars to him, although he had no right to use it. And on the 22d ult. he pronounced the preceding description of the discoveries "very good."

Hon. Judge O. Titus, of Dutchess county, used the same expression after perusing it a day or two before, confirming with pleasure the letters that he had written on this subject, to members of Congress and the state legislature.

That during the present year the discoverer has applied his system of cultivation to the growing of the sweet potato in Dutchess county, N. Y., and, as in all other cases, where he has applied it to any species of plant for the first time, his success has far exceeded his expectations, growing them in good garden soil,—without artificial heat, manure or sand—in 95 days after the 21st of June, more than eight inches in circumference.

The discoverer will add, that each and every individual to whom he has ever explained a confidential knowledge of this law in nature, has admitted that to the extent of their ability to judge, the undersigned is the orignal discoverer.

Said bill No. 395, for testing the practicability, utility and value of the improvements and discoveries, passed the Assembly only two days previous to the adjournment of the last legislature, the Senate laying it on their table; a portion of that honorable body assigning as a reason, that as the bill anticipated a conditional appropriation for defraying the discoverer's travelling expenses, no member of the legislature could be constitutionally one of the testing committee; a member of the Assembly being on the committee as the bill passed the Assembly.

Hon. A. J. Downing was in Europe during the past season of vegetation, and Hon. E. P. Prentice of Albany county, President of the State Agricultural Society, and one of its principal founders was substituted. And after the adjournment of the legislature the committee agreed to examine the subject; for which purpose the discoverer called on the committee in April, May and June, and again, to learn their conclusion, on the 8th and 9th inst., when the committee stated that they considered the existence of this newly discovered law in the vegetable kingdom, "*self-evident*," when exhibited and understood; and that as far as either of them could judge, the undersigned was the first discoverer of it; and that neither of them had been able to detect the discoverer in error in any of his various positions relative to his discoveries and system, nor in anything that he had said on the subject.

The committee, on the 8th inst., agreed to present the subject to the New-York State Agricultural Society on the 15th of January, (its annual meeting,) and solicit the society to apply to the legislature to cause the discovery, or discoveries and system to become public property.

Yesterday Judge —— of Dutchess county, said, "that there was one thing about this subject that he could not understand, and that was, that the discoverer apparently could get the recommendation of every person to whom he imparted a confidential knowledge of his discovery and system, commending to the public, either the principle or the practice, or both; and as yet, no efficient legislative action on the subject; to him, he said, it was incomprehensible; that he could not comprehend it."

But the people *must now* "come to his rescue," or the discoverer must abandon it again, as he did ten years ago.

As civilised society has no law to protect such discoveries, the discoverer asks of each citizen who is not incredulous, some direct or indirect aid, for the benefit of the human race, and for the honor of the age in which we live. RUSSELL COMSTOCK. *Mabbettsville, Dutchess Co., N. Y., Dec.* 12, 1850.

P. S. The reader who takes an interest in this subject, (and who does not?) will please attract the attention, (per mail or otherwise) of some member of the legislature to it, and also show it to members of the State Agricultural Society. R. C." *Poughkeepsie American, Jan.* 11, 1851.

# Domestic Notices.

GEN. HAND PLUM.—Being a constant reader of the Horticulturist, I have noticed several articles on the Gen. Hand Plum, and as its origin seems somewhat of a mystery,, and as I happen to know all that is known about it, I have taken the liberty of addressing you on the subject.

The tree from which the original graft was obtained, grew on the late Gen. HAND's place, on the Conestoga, about a mile from Lancaster, Pa., and if living, would now be fifty or sixty years old. About thirty years ago, Mr. GEORGE MILLER procured a graft, and succeeded in raising it. The original tree died shortly after. Mr. E. W. CARPENTER, nurseryman, of Lancaster, Pa., procured a specimen of the fruit about 1831, and as it was of an uncommon size, measuring about two and a quarter inches in diameter, I made a drawing of it for him, as I was in the habit of doing as fast as his standards came into bearing. He budded a number of trees, and sent grafts (among the rest,) to his brother, S. CARPENTER, of Lancaster, Ohio, and ROBT. SINCLAIR, Baltimore, and thus introduced it to notice. The drawing in the Horticulturist, though correct, is not as large as I have seen the fruit. It is supposed to be a seedling.

I would also bring to your notice another plum, introduced by E. W. CARPENTER, viz: the Montgomery Plum. He found the tree, (a very old one,) some twenty years ago, in a dying condition, on the premises of Mr. MONTGOMERY, and procured four grafts, one of which grew. I have never seen the fruit itself, but he describes it as a very large oval purple plum, and of a most delicious flavor, and very prolific. He has had them as large as a hen's egg. The wood and fruit somewhat resemble the German Quetsche, (blue prune,) though the tree is of a more vigorous growth, and more prolific. Dr. ELI PARRY of Lancaster, could doubtless procure you some of the fruit next summer. Having obtained a few grafts, I shall test it here. Yours respectfully. C. G. SIEWERS. *Cincinnati, March* 5, 1851.

[We are obliged to our correspondent for his concise and detailed account of these fruits. ED.]

BOILING WATER FOR PEACH TREES.—It has been thought impossible to recover a tree badly infected with the yellows. If the following experiment on a peach in this condition will prove of any use by saving the trees of others, it is at the service of your readers.

Many of our peach trees perished during the winter of '49. Others bore no fruit the following summer, and were deeply infected with the yellows, and were accordingly cut down and their roots grubbed up. One or two trees, however, in the same condition, were overlooked, and left. A friend, who is a successful fruit culturist, happened to walk into the garden, and observing a tree bad with the yellows, and hearing an intention of cutting it down expressed, cried out, "By no means, by no means, you can save it!" This was about the commencement of autumn. The tree was evidently dying—leaves yellow, stems full of dried withered fruit, and the root very gummy. He immediately caused a basin to be excavated round the trunk, and the gum and worms to be taken out thoroughly with a sharp knife; while this was doing he applied himself to heading in the branches, lopping off from one foot to three, as he thought necessary; cutting away all the dead spurs, twigs, and fruit, and pruning out superfluous branches of sound wood. This done, and the litter all carried off, he ordered a copious supply, (2 or 3 gallons) of boiling water poured round the trunk where the excavation was made. Whether it was the pruning of the limbs, the scraping about the base of the tree, or the boiling water, those wiser in pomology than myself, must decide; certain it is, however, that an influence quite magical was exerted on the peach, for in two or three weeks it put out fresh and abundant foliage, of a deep green, and continued full of verdure till late frost. [Boiling water is a most excellent application in the spring of the year, for diseased and feeble peach trees, and is a certain remedy for the peach worm. We presume from our correspondent's description *of the tree*

in question, that its yellow leaves and sickly habit, were the result of the attacks of the peach-worm—since he says nothing of the small *wiry shoots* and *diminutive leaves* that are the infallible symptoms of the yellows. The latter disease pervades the whole sap of the tree, and after many experiments, we believe it to be incurable. The best thing to be done is to dig up the tree infected with it, and burn it, root and branch. Ed.]

*Insect on the common daily, or China Rose.* This rose, a favorite with me, because independently of its beauty, it is easily cultivated, has been a source of disappointment for several successive seasons during the first flowering time of the summer. An insect resembling the bumble bee, (humble bee,) has been the depredator. It is, however, not half so large as the insect named, and of a dark color. Its attacks commence as soon as the buds begin to show the red leaf, and more vigorously as they are near unfolding. They eat around the edges of the petals, and scoop out the forward or half blown roses, in the form of a bowl. They have been killed by slapping the hands quickly together over a bud, before they are aware, thus catching two and three at a time; a continual succession, immediately, however, has supplied the place of those destroyed, and after a time they also become shy, ("biding their time") from the efforts made to kill them. In one season, those destroyed amounted to over three hundred.

"The rose is *sweetest* when 'tis budding new,"

says Sir Walter Scott, and so thought these vagrant bees; for not a full blown rose, nor even half expanded bud, could be had while the first blooming season lasted, after which time the bees found some other employment, or their race was run for the summer; for they would return no more until the summer of the succeeding year.

I was told the insect was called the Carpenter-bee, and misled by the name, hoped to find its haunts in the wood of some old building or hollow tree, but being disappointed in tracing them home, the roses were given up in despair. Last summer, however, the retreat of the bee was discovered in the claying or plastering of an out-door oven. The bees were found playing about numerous small holes they had bored in the sides of the oven, to and from which they had free ingress and egress; and even, in order as it may be presumed, to afford every facility for the infirm and delicate visiting the inner chambers of the habitation without exposure, they had many table-like galleries raised on the surface of the oven, communicating with the holes leading to the interior chambers, and with each other, after the manner of a labyrinth;—these were about the thickness of a finger, and made of finely wrought clay. No time was lost in destroying this populous city. It is only to be regretted that numbers of the inhabitants escaped, and, perhaps, that some forbearance was not exercised toward them for a time, in order that the internal arrangement of their dwellings, the larvæ, &c., might have been laid open for inspection, and curious investigation into their habits. What is the name of this insect? It seems decidedly of the *masonic* fraternity.

N. B. These bees attacked no other roses, although there is considerable variety in the garden, Yours. J. C. W. *Washington Co., Maryland, Jan.* 10, 1851.

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Raising Early Peas.—The course prescribed by your correspondent in the March number, for starting peas early, is certainly a good one, and worthy of the adoption of every lover of so rich and healthful a vegetable. We have tried another plan to effect the same results, which, although it may be no better, we have no hesitancy in commending to at least a trial. In the first place we dig a trench where we design to plant our peas, to a depth of, say six inches. This we fill two-thirds full of recent horse manure, and make it as compact as possible, which will leave a space of three or four inches between it and the surface. Over the manure, put an inch and a half of the garden earth, and sow the peas. We then take two straight-edged boards and nail them together in the form of a V. This is laid, inverted, over the peas, when it is cold enough to freeze the ground, and taken off in mild pleasant weather. They may be protected in this way until they are high enough to bush, and enjoy all the advantages of rain and sunshine where they are to grow. If the storm is heavy, they may also be protected from it, by replacing their covering.

As the spring advances, the hot and dry nature of the manure might, under ordinary circumstances, be injurious to the plants; but this we provide against. When our peas come up, they are an inch perhaps below the surface, and the earth taken from the trench, is some of it yet remaining to supply the deficiency. So when the peas are high enough, and the weather growing milder, we replace the earth until the trench is level with or higher than the adjoining surface. This gives strength and firmness to the plants, utterly destroys all weeds which may be starting from the manure, and prevents the heat and dryness of the soil which is incident to placing hot and fermenting manures near the surface. We speak of this method which we have found in our case to be a very good one, and leave for others to adopt or reject as they choose. Yours truly, Wm. Bacon.

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Raising Grapes in Pots.—If you will write an article for the Horticulturist, describing in detail the best method of raising grapes in large pots, (say of the size of 16 inches high by 14 inches diameter across the top,) under glass, and without fire heat, naming just what the soil should be, the watering, &c.—how much, if any, liquid manure had better be used for them, &c.—also how productive they can be made under proper culture, &c.—also as to the expediency of having a house on purpose for grapes in pots, and the kind of house for them if expedient—I name these details that you may see what points information is needed upon—if you will do this, you will much oblige an original subscriber in New England.

[Will some of our most experienced grape growers comply with the above request? We have already published two or three articles on that subject. Ed.]

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Cheap Vineries and Vine Borders.—Having read with much satisfaction, your article upon the construction of cheap houses for horticultural purposes, and their perfect adaptation to the cultivation of choice fruits, and that being a subject to which I have paid much attention, I cannot but think the subscribers to this Journal, many of them, must soon become much interested in it. They would derive more real pleasure in a few leisure hours devoted to the cultivation of choice fruits, grown under glass, than from any other source, it being a pursuit of which a person seldom tires, for the farther he advances the more interested he becomes. In the first place, let us see how this object is to be accomplished. You have pointed out the way of growing fruits in cheap houses, and a field is now open where practical men can add their experience. Many persons who have hitherto been disposed to commence something of the kind, have been in a great measure deterred on account of the expense of the materials employed in the construction of houses and the formation of vine borders. I allude now to "cold houses." In houses heated by artificial means there are expenses which it is impossible to avoid. We will suppose a man wishes to erect a cold vinery. His first question will be, what is the shaped house I require. He refers to the cut of Mr. Rivers? This kind of house answers admirably in England, but will it do as well in this country. Now I do not positively mean to assert that it will not, but I feel certain that one built in the following manner would answer much better for this climate at least.

It should be 2 feet high in front, and the back wall should be at least 10 feet high, and the width of house 14 feet, which would give the roof a better pitch, and prevent any great weight of snow from lodging, and also prevent a deal of drip, and as the vines would have to be brought up on a trellis under the glass, it would give the operator more room to attend to his vines. The frame work of the house might be boarded with planed and matched stuff as it is so much neater in appearance than rough boards, and the difference in cost between the two is so very trifling as scarcely to make it any object in point of economy. The back wall should have strips nailed on to the posts to form a trellis on which peaches, apricots or nectarines can be trained, and let me here remark, that I have never known an instance of stone fruit of any kind being attacked by the curculio that has been grown under glass. If some of your correspondents, who cultivate stone fruit under glass, would let us know if they escape in their different localities it might be worth reading, as it would then prove if it may be relied on as a general thing or only partially so. I have

been using for some years a very cheap and durable wire trellis for training vines under rafters, which I will describe: take some common hoop iron, 1 inch in width, and cut up into lengths of 10 or 12 inches; then punch two holes two or three nches apart, and one hole at the other end about 1 inch from the end, and large enough to allow of the wire which is intended for the trellis to pass through easily; then take some 1¼ inch clout nails and fasten the pieces of iron to the rafters. Begin on the first rafter at 18 inches from the plate, and so on in succession, so that each piece shall be exactly 18 inches from the other on the rafters. It is however, immaterial whether the distance be more or less, provided equal distance is observed. After all the pieces are nailed to the rafters, pass the wire through the holes, form the wire into a loop at one end—take a two inch wrought nail with a large head, put it in the loop and drive it home—that secures that end. Then strain the wire, drive another nail half its length, give the wire one or two turns round the nail, then drive it home, and the wire is secured. After all the wires are put in, parallel with the length of the house, take some small annealed wire, fasten one end to the bottom trellis wire and carry it up parallel with the rafter, and 6 inches from it, taking a turn round each large wire to keep it in its place. Each rafter or vine will require two of these wires. The pieces of iron should not hang perpendicularly, but stand out at an angle to correspond with the house. The materials for a trellis of this description for a house 14 feet wide, will not cost more than one dollar for every 10 feet in length. In glazing a vinery, use the best cylinder glass, that which is free from waves or blisters, for if a poorer quality is used it will be impossible to get rid of the burning of the leaves, unless the glass is whitened. The first cost will be a little more, but the better glass will ultimately prove the cheapest. The interior of the house may be devoted to the cultivation of vines in pots, or for raising early vegetables to transplant into the garden. Such a house as this can be put up, painted, glazed, the trellis built, and all made complete for about four dollars the running foot, or a nice snug little house 25 feet long and 14 feet wide for $100, such a house being, in fact, only a slight variation of Mr. Rivers', with the addition of more room. Trees are to be trained on the back wall, and vines under the rafters. Now let us see what such a house is capable of producing when the vines and trees come into full bearing. Nine rafter vines which will produce from 20 to 25 pounds of grapes annually, or two hundred pounds for the whole, (this is not an over estimate,) worth from 50c. to 75c. per lb. The trees on the back wall will produce from 20 to 25 dozens of peaches, apricots or nectarines, worth 3 or 4 shillings per dozen. The interior of the house I make no estimate on, as it is not my intention to mislead by making over estimates. I should like much to see amateurs take this thing in hand, not on speculation, but from the pleasure they would derive from it—also to give the people at large some idea of what the duties of a gardener are, and the qualifications he ought to possess, a thing bnt imperfectly understood in many parts of the country, and which frequently ends in disappointment, either through gentlemen being imposed upon by ignorant and inefficient men, or else that the talents of a really good man are not properly appreciated on the part of the employer, which I must say is too often the case.

For vines grown in pots, I would recommend the following mode for each pot. Procure a box or tub a few inches larger than the diameter of the pot, bore some holes in the bottom, place a block of wood two inches thick and about six inches square on the bottom of the box, and set the pot on it. Then put in two or three inches of charcoal or broken bricks. Then fill in the space between the pot and box with tan bark. By this mode the roots will not suffer from too rapid evaporation, which is very injurious to young vines; the block is to prevent the roots from running out of the bottom of the pot.

We are told by very many experienced cultivators, that unless we use an immense quantity of certain kinds of manures, in the formation of the borders of vineries, it is impossible to raise good grapes. Now I do not mean to say this is all idle stuff, because the grapevine, being a gross feeder, requires a great deal of stimulus, but what I will say is that most excellent grapes may be grown in the following

manner. If the soil is wet and cold, drain it well, trench it 2 feet deep, and put in plenty of old lime rubbish and rotten manure. If the soil is a good loam and does not lay low, trench it 2 feet, and to every layer of earth put on a layer of old rotten dung. The manure from old hot-beds is the best for this purpose; in the absence of that, use the best that can be had. I prefer wide and shallow borders, say two feet deep and 20 or 24 feet wide. Such a border as this will cost no more than for an asparagus bed the same size, but it should be mulched with rotten manure every summer, and forked in in spring. I would like to give my method of attendance to the vines during the growing season, but fear I have already extended my notes too far. Yours most respectfully, Wm. Webster. *Rochester, Feb.* 4, 1851.

[We shall be glad to have our correspondent's routine of vinery culture. We are not in favor of excessive feeding of vine borders—but we do not think a border will continue to give good grapes for many seasons, unless it contains at least *one fourth* of its whole bulk of good active animal manure—stable manure we prefer. Ed.]

Planting Strawberry Beds.—Pray give a new subscriber, who has not your back volumes to refer to, some plain directions for making a few strawberry beds, for the supply of a small family. When is the best season for planting; what are the best sorts, and how shall the soil be prepared? Yours. A. H. *New-London, Ct.*

Answer.—The month of April is the best time to plant strawberries in the whole year.

If you wish the largest and finest fruit, you must make the soil *deep* and *rich*. The best manure for the strawberry, is either poudrette, (we can recommend that of the Lodi Manufacturing Co., New-York,) or decomposed stable manure. If you have these, trench the soil two feet deep, mixing in a very liberal dressing of either of these manures, throughout the whole depth. Supposing, as is too often the case with beginners, that you have nothing but fresh stable manure, then, when you are trenching, bury this stable manure in the lower spit, (i. e., the lower of the two feet trenched.) To give it a good manuring, you should trench in as much stable manure as will be equal in bulk to one-third of this lower foot of earth. The reason for trenching it among the lower spit is, that it may be decomposed before the roots of the strawberries reach it. If mixed with the top spit, it would do more harm than good.

Having thus trenched and manured the soil, form it into beds three and a half feet wide. Draw three lines lengthwise through the beds, and set the young plants along these lines, about 4 inches apart. During the summer, the beds must be kept stirred with the hoe, and all runners should be cut off, that extend more than a couple of inches beyond the lines. You will thus have three *rows* of strawberries about ten inches apart—between which, the next season, you can lay straw or tan-bark, which will both keep down the weeds, and keep the fruit clean. This straw or tan may thereafter keep its place—the runners must be kept clipped, and a little additional straw or tan laid over the plants at the approach of winter, and removed again in the spring.

In this way—digging in a top-dressing of spent manure or poudrette between the rows every spring, your strawberry beds may be kept in good condition for four years—at the end of which time they must be abandoned, and new ones planted to take their place.

If, however, you do not wish the trouble of cultivating the plants so carefully, then plant them in the same way, and allow the runners to cover and occupy the whole bed. This they will do the same season, and the next year will give you an abundant crop—the fruit not so large as in the first case, but perhaps rather more in quantity. But the bed will only last one year, and you must make a new one every spring, to supply the place of the old one.

As to sorts, if you are to plant but three, let them be Large Early Scarlet, Burr's New Pine, and Hovey's Seedling. If four, add Rival Hudson; if five, Swainstone Seedling. There are many other good sorts, but this selection will probably prove most valuable to you. The *White-wood* is a nice, delicate, small fruit, and bears a long time, and is a pretty contrast in a dish of red strawberries.

Making New Lawns.—As we have had numerous inquiries lately, repecting the laying down of grass surfaces for lawns, we shall compress our answers into one, and make it public

for the benefit of all our readers interested in the matter.

A fine lawn, as every one knows, is the most essential ground-work of all ornamental pleasure grounds. It is not so easy to get a fine lawn here as in England, but quite as easy as on most parts of the continent. What we have to contend with, are our dry summers and hot sun—which often parch up and turn brown a lawn made in the ordinary way. This is not to be guarded against, as some suppose, by enriching the top-soil where the lawn is, but by making it *deep*—so deep that the roots of the grass, instead of depending on the top layer of the soil, which always suffers by the heat of the mid-summer sun, shall run down to the cool under layer, eighteen inches or more deep—which preserves a more uniform moisture and temperature.

If you are preparing the ground for a new lawn, let the first point, then, be to deepen the soil. It ought to be at least 18 inches, and is better if two feet deep. If it is a small surface you can prepare it by trenching—if large, by using the sub-soil plough. It is well to mix a good coat of manure with the sub-soil while this is going on—and it is just as needful (or even more necessary) that the sandy soil should be as deep as clayey—for unless the sub-soil is well stirred the roots of the grass will not penetrate there.

The soil being well prepared, and the surface made quite even and smooth, sow it with a mixture of *blue grass* and *white clover* at the rate of three bushels to the acre.* There should be about two quarts of white clover seed to a bushel of blue grass—all mixed intimately together before sowing it; and if a quart or so of *sweet scented grass* is mixed with the whole before sowing, the lawn will give out a delicious odor every time it is mown. The seed should be sown in a still day (if just before rain so much the better) very evenly, by hand, and the ground should be lightly raked, and if possible rolled afterwards.

* We formerly recommended *Red-top* and White Clover; but some careful experiments of different grasses for a lawn have satisfied us that the *Poa pratensis*—known in various parts of the country as "bent-grass," "blue grass," "green grass"—which grows by the road sides in most parts of the country, is superior to the Red-top—being a closer, and finer, and greener turf, and enduring the drouth better than the Red-top.

To keep a lawn in good order order it requires in our climate, to be mown about once a fortnight—with a sharp, broad-bladed lawn scythe. In England, we found *mowing machines* in very general use for this purpose, and when there is much lawn to be mown they would be found of equal or even greater value here. One of these machines is small, and is managed by hand; the other requires a man and a horse, and will mow as much in a day as six good mowers,—rolling the lawn as it mows it—and mowing the grass as neatly and evenly as if it was done with a pair of shears.

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Rural Hours.—We have already spoken of Miss Cooper's charming hand-book of nature and the seasons, published last winter under this title. But lest any of our readers, and especially our fair readers, who would study nature, now in her freshest and most winning garb, should not yet have made its acquaintance, we must be allowed to allude to it again. The way to enjoy the "Rural Hours," is to take the book in hand daily, and read it as the season unfolds itself—for it is a diary of nature, telling us of every bird, and flower, and rural incident that makes part of the out-door life of country people. Make its acquaintance, study it in this way, and you will feel as if the author were a personal friend, who knows nature's sweetest secrets, and lets you into all her confidences.

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To Propagate the Scarlet Japan Quince.—Being afflicted with deep horticultural propensities, I have, as a matter of course, been led to "try all things, and prove all things," in the true *horticultural* sense of the quotation. I was exceedingly desirous of obtaining a large quantity of the *Pyrus Japonica*, for the purpose of using it for a division hedge. I tried various modes of propagation. Firstly, by grafting on the stock and on the root; by layers, which seldom took root; by cuttings of the roots, which method did *pretty well*. But not being satisfied, I made another experiment, which resulted in complete success.

Having had occasion to move two large plants of the scarlet variety, and one of the white, I was obliged, very unwillingly, to take them up after they had bloomed, and just before the leaves were fully expanded. *Severe pruning* was necessary in this case; and when I beheld

the tops of my beautiful bushes lying on the ground, my propensity seized me, and I could not consent to throw away the trimmings without an effort to save them.

So down I sat, on the edge of the border, and after cutting off all the last year's growth, I placed them in a warm, rich soil; but I confess, without *faith*, even to the extent of a *hundredth* part of a grain of "mustard seed."

There I left them, for weal or for woe, exposed to the full blaze of *almost* a summer's sun. I passed by the spot every day for a week, and each time thought how many fruitless experiments I had made, and this very one likely to be another of them. Several weeks passed away, when I thought I would visit my cuttings, and to my utter astonishment, every one of them had grown, and made nice plants by autumn! This is a horticultural fact.

I have a few now on hand, which I would gladly present for the benefit of some one, who may be even now, as *verdant* in these matters as I was, previous to my *sufferings*. Thy sincere friend. E. S. *Hillside, Cayuga Co., N. Y., 3d mo., 3d*, 1851.

[We thank our fair correspondent for her useful notice, and shall be glad to hear from her again. Her postscript, in which she frankly owns herself "a real live-woman horticulturist," pleases us still more. When American women know their gardens in this way—by actually shaking hands with garden tools, daily—then they will begin to enjoy them in right earnest. Ed.]

Camellias in Rooms.—I have tried for two years to bloom Camellias, but without success. I have Elegans, Donkelarii, Variegata, Candidissima, Derbyana, Florida, Tricolor, and Imbricata. During the first year, I had them in my sitting room, enclosed in a glass case, which was aired every day. The room was warmed by a furnace, supplied with air from without the house. The thermometer in the room, ranged from 60° to 70°. In the case, it was much lower. They were frequently syringed above and beneath the leaves, and occasionally wiped with a wet sponge. The second year, they have been kept in a closet, adjoining my counting-room. The closet has a large window looking south, and receives its heat from the counting-room, which is itself heated by steam pipes. The thermometer in the main room ranges from 60° to 70°, and in the closet, will be 10° lower. The plants were kept back from the window and in the shade. The window is opened for fresh air, whenever the weather will permit—and I have a tub filled with water, warmed by a steam pipe, whenever used for watering the plants, or to make the air of the closet of a proper degree of moisture. The closet is 12 feet by 6, and 11 feet high. During the summer, the plants were kept out of doors, and in the shade. I get buds, which swell and promise, and show the tip of the beautiful petals within, and then become "done brown," drop and perish. What is the matter? Yours, A Floral Enthusiast. *Lawrence, Massachusetts, March* 10, 1851.

[The Camellia is one of the worst plants for close rooms, as it wants a great deal of air, and a very uniform atmosphere, to bloom freely. If you can contrive to ventilate your room or plant-closet so as to have a stream of pure fresh air (warmed of course) pass through it, we think the flowers will open well. Ed.]

Cherries—Pear Blight—At a sale of French fruit trees, in New-York, April, 1841, I purchased with others, over fifty cherry trees, under the names of White Bigarreau, Red Bigarreau, Guine of Turkey, Bigarreau de Lyon, Royale Hative, Black Griotte, &c., but on their passage home the labels were lost; none proved to be better sorts than we had, except one kind, and that I supposed to be the Bigarreau de Lyon, and have so called it. I have never seen the cherry described in any foreign or American horticultural or pomological work, until in your Jan. Horticulturist, where you describe a cherry as "The Great B'garreau." The shape, size, color and flavor, appear to be identical with the sort I have. It has sometimes ripened a little before the Tartarian. It has a remarkable growth; the foliage is larger and longer than any I have seen, and I consider it the most desirable cherry known. If among the list above named, you think I have selected the right, you can adopt it, or wait until the bearing season, and I will send you samples of the wood, leaf and fruit.

Soon after the purchase alluded to, I commenced setting pear trees on quince stocks, (although told by my neighbors that they were

short lived, and would not pay the cost,) and they have succeeded well; borne early and profusely until the last summer, and dwarf pears have now become popular, and are much sought for here. Out of about three hundred trees, I have lost forty-five, thrifty and full of fruit, by blight. What is the cause, and what the remedy? I have not seen anything satisfactory on the subject. My plum trees are very productive, for the benefit and ravages of the curculio only; covering with gauze, salt, lime, and mulching, have entirely failed. My next experiment will be with pigs and chickens. Very respectfully yours. LEWIS EATON. *Buffalo, N. Y., Jan.* 12, 1851.

[The cause, in brief, of your pear blight, is the tenderness of the sap vessels of the foreign pears, whereby they suffer in the heat and cold changes of our variable climate. The remedy is to wind straw ropes round the stem and larger branches of your dwarf trees, and mulch the surface of the ground over the roots. A cultivator of our acquaintance, who lives in a blight district, and who made wry faces for years, over the blight, has become a cheerful and happy man, since he has practiced this simple method. It is useless to go into long arguments—there is no end to them on this subject—but "a word to the wise," etc. ED.]

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A BUDGET OF QUERIES.—*A. J. Downing, Esq:* May I trespass on your kindness by soliciting answers to the following queries:—

1st. What is the best way of composting the leaves of the forest for manure? [By treating them with the lime and salt mixture described in Hort. Vol. iv. p. 202.]

2d. Will unleached ashes or lime most readily promote the decomposition of leaves? [Either—but the latter will act most speedily.]

3d. Which in "your opinion" are the four best pears for *market cultivation*, (2 of them on quince and 2 on pear roots,) out of all the old and new varieties? I mean four most suited for this eastern climate and this naturally poor gravelly soil—four out of the vast collection—of a thrifty and vigorous growth. I know and appreciate the qualities of the Bartlett and Louise Bonne de Jersey, but would not a cultivator be at his wit's end to keep up the prices and sell 300 bushels of either the above named varieties, provided these sorts continue to be cultivated by "every body?" [No fear of an overstock of fine pears—no one will see it in our day. Your question is difficult. We should say Bartlett, Louise Bonne de Jersey, Vicar of Winkfield, and (if it answers on your soil) Black pear of Worcester.]

4th. Which is the best Raspberry for market cultivation, taking into consideration tenderness, firmness, and productiveness? [The true Red Antwerp.]

5th. How near may be planted the different varieties of squashes and melons without fear of mixing. For instance I have a two acre field, one-half of which I should like to devote to squashes next summer, and the other half to melons. Would the quality of each be deteriorated by so doing? [Will mix if nearer than 100 feet.]

6th. If the flavor of melons should become injured (a little squashy) the first year, would the 2d crop, planted with the seeds of the first, be liable to a further deterioration? [Of course, but so far as we have observed the *fruit* is not affected the first year, only the *seed*. The second year the mixture becomes apparent in the fruit.]

7th. Which is the best water-melon and the best winter squash? [The Spanish water melon and the Autumnal Marrow squash, are two very superior sorts.]

8th. Can plum trees be grafted in the spring with success, instead of the usual way of budding? [Yes, very easily, if by whip-grafting—but cleft-grafting requires more skill in the plum than in other fruit trees.]

9th. Does it injure apple pomace to be exposed to frosts, before planting in the spring? [How "in the spring?" The seeds should be freed from pomace as soon as possible in the fall.]

10th. Is it necessary that pits and seeds of fruit be buried in the ground to suffer the action of the frost, if planting be delayed till spring? [The action of the frost is not needed. What is needed, is that the seeds be kept moist in damp earth during the winter, and if the earth is not froze at all, so much the better. If the seeds have become dry it will be necessary to soak them for half an hour in hot water—not quite boiling—before planting.]

11th. Can you give me any information in

regard to the invaluable mineral substance recently discovered in New-Jersey. It will work miracles, mixed with ashes, on our unfertile land. You may have had means of knowing at what expense it might be obtained in Newark or New-York? [Know nothing of it, and will be glad to learn what it is.]

With sorrow at troubling you with so many queries, mixed with joy at being allowed to seek all this information at the fountain head, I remain your friend, A. J. R. *New-Bedford, Mass., Feb.* 6, 1851.

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Horticulture in the Interior of Georgia.—Although but a recent subscriber to your valuable periodical, I have been an interested reader of it for some two years past, and I venture to offer an article for publication in it, if you think it will prove acceptable to your subscribers.

I am a native of the valley of the Mohawk, and have spent some thirty years of my life in it; but for the last twelve years have been a resident of Habersham county, Ga., a section of country comparatively little known at the north. My chief intention is to give your readers a short history of its location, geological formation, its native fruits, flowers, &c. Habersham county lies in the northwest corner of the State, and mostly on the first *steppe* of the Allegany range of mountains, some 3000 feet above the ocean level; its climate is unequaled for salubrity in the United States, the thermometer rarely rising in midsummer to 90° during the day, and at night usually about 60°, while our winters are mild, with but little frost and snow; and now, while writing this, I am sitting in my room with the sashes up and the door open. Our summer nights are delightful and cool, so that one always needs a blanket when sleeping, for covering. Billious fever, that scourge of the south, never intrudes here, nor the insinuating consumption of the north; consequently Habersham is a place of resort for the rice and cotton planters of the lower portion of the state. The soil is poor upon the hills and upland, and in the vallies and bottoms, rich and productive, and composed of the elements of granite, the primitive formation of the mountains here. No cotton is raised here, it being too cold for it to mature well; corn, wheat, rye, oats, and all the grasses succeed as well as at the north. Farming is conducted very rudely, but is improving, owing to the influence of agricultural papers and societies. I wish you could see a southern plough, such as are used here in the mountains. It would be a great curiosity to a New-York farmer, were he to find one in the road. I am sure he could not tell for what use it was intended, or to what nation of people it belonged.

In this county is situated the far-famed falls of Tallulah, and the beautiful fall of Toccoa, both worth a trip across the Atlantic to be seen in the month of June, when thousands of Rhododendrons, Kalmias and other flowers and shrubs which surround, are in bloom; and were some of your experienced manufacturers, only to see the number of splendid water-falls here, wasting their power in obscurity, and as it were, inviting and tempting them to come and use them, almost for the using alone, they would, I think, forthwith be off to Georgia, notwithstanding the great bug-bear to northerners, Negro slavery.

The forests are almost unlimited in extent, as the country has been settled but about 35 years, with a present population of 8000 whites. The forests are composed of say 8 or 10 kinds of Oaks, the same of Firs, Chestnut, Hickory, Walnut, Poplar, Gum, Birch, Holly, &c. Wild grapes abound here; Fox grapes and Muscadines without number, in this and the adjoining counties of Rabun and Union; and by the way, we have three varieties of native grapes that possibly may prove valuable for cultivation. One of them is a large white grape, about the size of the Isabella, but sweeter. Another, a red grape about the same size, a little more acid, and the other a small white grape about the size of Herbemont's Madeira. None of them are known, except in the neighborhood, where they are still growing wild in the coves of the mountains. I am unable to give the botanical character, as I have never seen them when in flower. I have them all in process of domestication, and will if desirable give you the results.

Foreign grapes thus far do well. We have the white Burgundy, white Muscat and some others, all which grow in the open air; the rot occasionally attacks them, but judicious manuring is a remedy for it. The rascally curculio takes all of our nothern plums, nectarines, cherries,

and apricots. Last year we thought to be rid of his presence, as the previous year we had a frost in April, which killed all the fruit. We had neither apples, pears, plums, peaches, nor anything else in the fruit line, within 50 miles of us. But lo! this year, "Monsieur Tonson come again," and more than ever. Where did he come from? Not from the fruit that fell from the trees the year previous, for we had none.

We have some fifty varieties of your best northern apples, and as many of pears, all which succeed very well. Also some fine native apples; and I should like to send you, (if the distance was not so great,) a barrel of them, to compare with your Newtown Pippins and Spitzenburghs, &c. Much attention is being paid, for a few years past, to the cultivation of fruits—and this county can probably boast a larger variety than all the rest of the state together. Thus far, cherries do not succeed, from the splitting of the bark when about three years old; the cause we cannot ascertain. Some suppose it to be caused by the heat of the sun; I doubt it, as the temperature of summer is below that of Albany or New-York. Peaches flourish in perfection, and native trees do bet- than northern, of every description, and come into bearing sooner.

I intended to say something about our southern shrubs and flowers, when I began, but as this article has reached such a length, I fear if I should say anything more, you will not print it, and if you should, your subscribers will not read it; so will defer it for another time. Yours respectfully. J. Van Buren. *Clarksville, Ga., Jan.* 23, 1851.

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Native Bone Earth.—The discovery has been made, recently, of an "inexhaustible quantity" of native phosphate of lime, near Dover, New-Jersey. It has been analyzed by Dr. Chilton, Prof. Mapes and Dr. Antisell, separately, and pronounced by them to be superior as a manure, to the bone dust usually sold in New-York market. The legislature of New-Jersey, we understand, passed a bill last winter, chartering a company for working this mineral manure, and putting it into market extensively—but Gov. Ford has vetoed the bill. Perhaps the Gov. means that his own state shall be made fertile first. If this manure corresponds to the expectation formed from the published analyses, it will be in great demand for grain crops and fruit trees—especially pears.

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The Value of Carrots.—Very few persons are aware of the fact, that young carrots are among the most wholesome of vegetables, and greatly *assist digestion*. French cooks, in many of their stewed dishes, introduce small slices of young carrots, and the *Julienne* soup, so common on every French table, is seasoned with finely chopped vegetables—young carrots being the most important, and the difference in digestion between a dinner eaten at a French *cafe*, and an English hotel, is not alone in the cooking, but in the vegetable condiments introduced. It is only lately that the chemists have explained the digestive stimulus known to exist in the carrot, to consist in a peculiar acid —*pectic acid*—found in this vegetable.

After saying so much, with a view to the promotion of a better understanding with the carrot in our kitchen gardens, we quote the following in corroboration from the *Working Farmer*, calculated to increase the field cultivation of this useful vegetable:

"Two bushels of oats and one of carrots, is better food for a horse than three bushels of oats; and when used for light work, the quantity of carrots may be increased. With such food horses will enjoy good health and spirits, a loose hide, shining coat, and improved digestion. It may be thus explained: The carrot is very nutritious, and, in addition, has the curious property of gelatinizing the watery solutions contained in the stomach of the horse. Carrots contain *pectic acid*, a single drop of which mixed with the juice of an orange or other fruit, immediately turns it into a jelly, and the Paris confectioners use it for this purpose. Soups in which carrots have been boiled, are always gelatinous when cold, and are more easily digested when used as food, than soups otherwise made.

The bene plant has similar properties. A thin slice of this plant thrown into a glass of water, renders it ropy and gelatinous, and for this reason it is a specific for summer complaint with children.

By examining the dung of a horse fed in part on carrots, it will be found to contain no undigested hay or oats, and therefore less quantities of those materials are necessary than when half the amount swallowed is parted with in an undigested state. For fattening animals the carrot is equally valuable, and for milch cows they surpass any other food. The milk of a cow at mid-winter fed on carrots, is equal in flavor to that supplied from clover in summer, while the

butter made from the milk is finely colored and highly flavored.

In soils containing proper proportions of bone-dust, sulphuric acid, potash, and common salt, 800 bushels of long orange, or 1100 bushels of white Belgian carrots may be easily raised per acre, while the same land will not produce one-tenth the quantity of oats. We have sold our crop of carrots this year to the livery stable keepers of Newark, at 50 cents per bushel, and we could have sold another thousand bushels or more at the same price."

## Answers to Correspondents.

Evergreen Hedges.—*A Friend to Improvement*, (Northampton, Mass.) We prefer the Norway Spruce to the Hemlock, for a hedge, because it grows faster, and makes a stronger barrier. As the shoots of the latter tree are slender and pliant, they require to be sheared many years before they form an impenetrable hedge. In point of beauty, there are few hedges that surpass a hemlock—as some fine hedges near Philadelphia bear witness. Plants six to eighteen inches high, are the most suitable. Your soil would be improved by trenching, or sub-soil ploughing.

Painting.—*E. B. P.*, (Springfield, Illinois.) You have painted your house a drab, and the cornices, window-dressings, &c., a brown-stone color. The best effect, then, for your blinds, will be obtained by painting the frame of the blinds the same dark brown, and the slats, or luffer boards, the same drab as the house.

Rose Seedlings.—*A Lover of Roses*, (Franklin Co., Pa.) To raise roses from seed, you should gather the seeds when fully ripe, divest them of the pulp, mix the seeds with sand, and put this sand in a flower-pot or box, covering the surface with something to prevent the mice from devouring the seeds. Then place the pot or box in the cellar, and keep the sand moist. When the spring opens, sow the seeds in a common hot-bed, and when the plants are about an inch high, transplant them into a rich, light border, shading them till established. When the seeds are sown in the ordinary way, they frequently lie two, and sometimes three years, before vegetating.

Grape Border for Vineries.—*J.* (Philadelphia.) Your border must not be less than 14 feet wide and 2½ feet deep. If the sub-soil is porous, so that it drains itself, that will answer; if clayey, you must make the border three inches lower, filling the bottom with brick-bats and oyster-shells, and cutting a drain from the lowest side of the border, to carry off the wet. Taking it for granted that the natural soil, where the border is to be made, is a good loam, let your border be composed as follows: One-half loam, one-fourth stable manure, one-eighth broken oyster-shells and bones, and one eighth decomposed vegetable matter—such as decayed leaves from the woods, decomposed black earth from swamps, or sods chopped up. To a border of this kind, 25 feet long, add a cart-load of leached wood ashes, and a peck of plaster of Paris. The whole should be mixed very thoroughly together. The best three or four sorts for a cold vinery, are the following—Black Hamburgh, Muscat of Alexandria, Royal Muscadine, Grizzly Frontingnan.

Stowell's Sweet Corn.—*R. S. Knight*, (Waterloo, N. Y.) If you refer to the article again, you will see that the seed is to be had of Prof. Mapes, Newark, N. J., and not of us.

Pruning.—(*West Jersey.*) The best time to head-back the old forest trees you describe, is immediately before the sap starts. Brush over the wounds, in all cases, with the liquid shellac, (gum-shellac dissolved in alcohol, to the consistency of thin paint,) described in our work on Fruits.

Cherry Tree Grubs.—*C. P.*, (Granville, O.) Push a small wire into all the holes containing the grubs, and thus kill all you can. About the first of May, coat over all the trunks and larger branches of the trees affected, or liable to be attacked, with a mixture of soft-soap and tobacco-water, put on as thick as it will work easily from the brush. If you leave it till June, it will be too late—the grub coming out in a winged state then, and depositing its eggs in the bark. The same treatment for the apple-tree borer. Dont prune your apple trees for the mere sake of pruning. If the limbs do not actually interfere, you had better let them alone.

Dissolving Bones.—*J. R. S.*, (Clarksville, Ga.) To dissolve bones, provide a strong cask, fill it three-fourths full of bones—(broken into pieces if you wish to save time.) Pour over them a mixture of sulphuric acid, (oil of vitriol, which may be had at the druggists for 2½

cents per lb.) and water, in the proportion of one measure of acid to eight measures of water. In ten days, or a fortnight, the bones, or most of them, will be found dissolved—and if any remain, a fresh dilution of acid can be applied to them. Whatever acid remains not taken up, should be poured into the compost heap, as it is a very powerful manure. If you cannot procure acid, you may bury a large mass of bones in a heap in the earth; they will heat, and gradually decompose of themselves—to aid which, pour hot water over them before covering them up. They are usually ground in a strong mill, without being calcined—when offered for sale as a manure.

Grafting Grape-vines.—*A. M.*, (Detroit.) Bury your grafts in a cool, shady place, covering two-thirds of the lower part, till the stocks that you wish to graft have begun to grow, and their leaves are as large as a shilling. Then graft, and you will be successful. The great flow of sap, almost destitute of organizable matter, in the grape-vine, often prevents the graft from uniting with the stock, when set at the usual time.

Peat Earth.—*A. P. W.*, (Columbus.) The common black earth of swamps is of no value as a fertilizer in its raw state—being "sour," or full of acid. It will, therefore, do your trees and plants no good for the first year, if put on fresh from the swamp. You must reduce it, either by mixing it with fermenting manure, or by treating it with brine, ashes, or lime slaked with brine. The latter is the best mode. But if you wish to make it ready for immediate use, you can mix it with newly slaked lime—two bushels to a waggon load. Mix the lime in layers through the heap, and let it lie for a week—turn it over and let it lie a few days more, and it will be ready for use.

Insects.—*A Novice*, (Bangor, Me.) If you spread coarse refuse salt over your garden and field, at the rate of six bushels to the acre, as soon as the land is fit for working, you will destroy the cut-worm, (the white grub that destroys your vegetables,) and benefit the land.

Hedges.—*A Massachusetts Subscriber*. You inquire about our silence respecting the Arbor Vitæ as a hedge plant. We consider the Arbor Vitæ the most valuable and useful of all our native evergreen trees, for an inside hedge, or *screen*—but it is hardly fit for an outside hedge, except in civilised parts of the country, like Massachusetts, where animals are not allowed to run at large.

Girdled Trees.—Fit in a piece of bark from the limb of another apple tree, either all round, or on one side of the spot that has been girdled. If you do it neatly, binding the whole up tight, and covering it from the air by a plaster of grafting clay, the strip of bark will unite like a graft, and the tree will be saved.

Plum Tree Warts.—*J. G. Pease*, (Dutchess Co., N. Y.) The branch you sent is not affected by the black wart. The eggs deposited there would hatch, and the branch perish without any wart occuring.

Transplanting.—*H. H. Coit*, (East Cleveland, O.) We are not aware that any of our nurserymen grow evergreens for sale by the thousand. Traders in native evergreens are in the habit of supplying large quantities of the most popular sorts—such as Balsam Fir and Spruce, at about $1 to $6 per 100, one to two feet high—packed in crates. The larger number of these trees come from Maine, and a line addressed to Col. Little, Bangor, Me., would probably obtain for you the details of this trade. Your best course regarding foreign evergreens, will be to import them *early* next fall, from English nurseries. Rivers of Sawbridgeworth, Skirving of Liverpool, and Whitley & Osborn, Fulham, all deal extensively in these trees. Write for a catalogue with prices, and then send your order through Harnden & Co., N. Y., or any shipping house with whom you can deposit the money—or buy a bill of exchange, and send it in your letter containing the order. The Italian grape you mention, (*Pitsiotella*) we do not know. *J. W. Gray*, (New Fairfield, Ct.) Trees are of the best size for transplanting from the woods to the nursery, at from 4 to 6 feet. Shorten back the tops well. If they are to be sent a distance, cover the roots with old cotton bagging, and the tops with straw. The seeds of the Hickory nut should be planted in the fall.

Special Manures.—*An Orchardist*, (Morristown, N. J.) The reason you failed to get any good from the top-dressing of lime and ashes that you gave your fruit trees, is, from your account, very plain to us. Your trees have com-

pletely impoverished the ground where they have been growing and bearing, without any new supply of food for fifteen years. Nothing that you can apply as a mere top-dressing, will restore such trees—whether in the shape of animal or mineral manures. Clear off all the old soil over the roots—taking care not to injure or cut them. At the outside of the principal roots, dig a trench all round the tree—18 inches deep. Throw aside the old exhausted soil in this trench, and replace it by new soil from the corner of some good pasture field, where it has laid fallow for years. Mix with this soil a heavy dressing of good stable manure, or rich compost of any sort, that you may have. This will give new life to the exhausted constitution of the tree. If you now add a bushel of ashes, and half a peck of air-slaked lime to the new soil that you must put in the place of that which you took from the surface roots, your trees will be well supplied with both organic and inorganic food. Both are needful; and absolutely necessary as lime, and potash, and phosphates are to the growth of trees, they can no more live upon these in a worn-out soil, than a man can live on salt, and pepper, and mustard, with no beef or bread to go along with them.

INSECTS.—*Owen T. Hobbs*, (Randolph, Pa.) The eggs of the peach tree insect we do not recognise—will be able to say what it is if they hatch.

## Horticultural Societies.

PENNSYLVANIA.—The stated meeting of the Pennsylvania Hort. Society occurred on Tuesday evening January 21st, 1851—the president in the chair. Owing to the precariousness of midwinter, contributors do not risk fine specimens of plants; hence displays are less attractive. One small collection, however, of a very interesting character, was shown by Robert Scott, foreman to Robert Buist, consisting of Forsythia viridissima in flower, and exhibited for the first time, Epacris nivalis, E. purpurascens, E. coccinea, Correa multiflora rubra, C. bicolor, Erica Wilmorcanei, and Clerodendron splendens. James Ritchie presented a beautiful seedling Camellia, and a large collection of cut Camellia flowers, of the choicest varieties. Designs, baskets of cut flowers and bouquets, were unusually handsome. Of fruit, a few dishes of apples only were seen. The committee on this department, reported that they were regaled on New Year's day with Hamburg grapes, which had just been cut from the vine under glass, by William Johns; the merit consisted in the mode of *preservation*, being ripe last October, and retaining their freshness and flavor. This result was effected by darkening the house, thus checking the growth of the vine, with occasional circulation of air to prevent moulding. Of vegetables there were four large displays of the finest esculents. Thomas Mechan, gardener to A. M. Eastwick, (Bartram's Garden,) exhibited a dish of blanched dandelion plants, the leaves of which are eaten as salad, and by some much relished.

The committee of finance reported as to the correctness of the Treasurer's accounts and favorable state of the investments.

The special committee on the accommodations of the Society submitted a lengthy report which was ordered to lie over for consideration.

An interesting communication was read from Dr. John Dawson, (formerly of the city,) dated Cape of Good Hope, South Africa, Nov. 8, 1850, purporting that he had procured of the "Botanic Garden Commission" of the Cape, a package of seed, and had forwarded the same to the Society, and desiring a reciprocity.

At the annual meeting. the following officers were elected for the ensuing year:

*President*—CALEB COPE.

*Vice Presidents*—Gen. R. Patterson, Jas. Dundas, Joshua Longstreth and E. W. Keyser.

*Treasurer*—John Thomas.

*Cor. Sec'y*—Thomas C. Percival.

*Rec. Sec'y*—Tho. P. James.

The stated monthly meeting for February, occurred on the 18th. The President, upon taking the chair, addressed the society, tendering his thanks for the marked expression of confidence in his re-election, dwelling upon the usefulness of the association, and alluding to its prosperous condition, remarking that of late some little extravagance had crept into its management, which only required investigation to be remedied, and reiterating his intention to retire at the termination of the year.

The display on the occasion, consisted of two fine collections of plants. In that from R. Buist's houses, were three new and interesting specimens—the *Boronia anemonifolia*, *Erica levigata* and *E. aurantiaca*, which were seen for the first time. Among A. M. Eastwick's plants were many choice species. Three sets of Primula sinensis were presented by John Lambert, Robert Buist, and A. M. Eastwick's gardeners. Displays of cut Camellias, which were unusually rich and extensive, were from

the houses of James Ritchie, Robert Buist, John Lambert and John Dick. Two very large vases, supporting pyramids of the choicest cut flowers, exhibited by Andrew Dryburgh, were much admired. Of fruits, there were a few dishes of apples. Of vegetables there were three very large tables from the gardens of Anthony Felten, Joseph Ripka and Miss Gratz.

The appointments of standing committees for the ensuing, year was announced.

*Members elected.*—Sir Wm. Jackson Hooker, London, Eng.; John Dawson, M. D., Burmah, E. I., to honorary and corresponding membership, and three as resident members.

THO. P. JAMES *Rec. Sec.*

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BUFFALO.—The annual meeting of the Buffalo Hort. Society, was held February 19th,

President, LEWIS EATON, in the chair.

On motion, T. Burwell, Esq., was appointed Secretary, pro. tem.

The Treasurer, A. A. Howard, read his report, which shows a flourishing condition of the finances.

The Society then proceeded to the election of officers.

Lewis Eaton was re-elected President, but declined the office, and

On motion of H. B. Potter, his declination was accepted, and the thanks of the Society tendered him for his valuable services.

On the second ballot, BENJAMIN HODGE was unanimously elected President of the Society for the ensuing year.

*Vice Presidents*—Abner Bryant, H. B. Potter, Joseph G. Masten, and Jas. W. Brown.

*Cor. Sec'y*—W. R. Coppock.

*Rec. Sec'y*—Jno. B. Eaton.

*Treasurer*—A. A. Howard.

The following committes were appointed:

*Flowers and Flowering Plants*—W. R. Coppock, J. W. Brown, F. Bryant, C. F. S. Thomas and E. Ford.

*Fruits*—L. F. Allen, Lewis Eaton, H. W. Rogers, J. G. Masten and J. Dart, Jr.

*Vegetables*—J. Sexton, O. Allen, R. Hadfield, S. J. Mills and T. Burwell.

On motion of L. F. Allen, it was

*Resolved*, That the President, Treasurer and Recording Secretary be constituted a committee on the subject of printing.

*Resolved*, That the Society hold four exhibitions during the ensuing season—in the months of May, June, August and September.

On motion of Lewis Eaton.

*Resolved*, That the Society hold monthly meetings throughout the year, at such time and place as may have been appointed at the previous meeting.

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MONTREAL BOTANICAL SOCIETY.—At a meeting held in Mr. Garth's Rooms, on Feb. the 20th, called for the purpose of forming a Botanical Society in Montreal—present, Messrs. Shephard, Garth, Taylor, Turner, Small, Archibald, Spriggings, Cockburn, Brown, Carroll, Laurence and Allan.

It was resolved to form such a Society, to be called the "Montreal Botanical Society," having for its object, principally, mutual instruction in the study of Botany, the investigation of Plants indigenous to the country, and the classification and examination of the Fruits cultivated in Canada.

It was resolved, in order that information regarding the structure, uses, and classification of Plants may be more widely disseminated, that a Library be formed principally of Botanical works.

The following gentlemen were appointed office-bearers for the ensuing year, viz:—

*President*—Mr. SHEPHARD.

*Vice President*—Mr. Garth.

*Treasurer*—Mr. Spriggins.

*Secretary*—Mr. Brown.

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NEW BEDFORD.—At the annual meeting of the New-Bedford Hort. Society, held Feb. 6, the following gentlemen were unanimously chosen as the officers of the Society for the ensuing year:—

*President*—JAMES ARNOLD.

*Vice Presidents*—Henry H. Crapo, John Howland, Jonathan Bourne, Jr., William P. Jenney.

*Treasurer*—William C. Coffin.

*Cor. Sec'y*—John H. W. Page.

*Rec. Sec'y*—Matthew Howland.

*Executive Committee*—The President, Treasurer, Rec. Sec'y, L. B. Keith, Matthew Luce, James H. Collins, and James Moores.

*Committee for Establishing Premiums*—The Chairman of the Committee on Fruits, do. on Plants and Flowers, do. on Trees, Shrubs and Entomology, do. on Vegetables, Willard Nye, and George Tappan.

*Library Committee*—Joseph C. Delano, Geo. Howland, jr., Samuel R. Brown.

*Committee on Fruits*—H. H. Crapo, Wm. Swift, Wm. T. Cook, Jos. Clark, Rodolphus N. Swift.

*Committee on Plants and Flowers*—Thomas A. Greene, William C. Coffin, Wellwood Young, F. P. Chase, I. D. Hall.

*Committee on Shrubs and Entomology*—Augustus Taber, Obed Nye, Hattil Kelley, Wellwood Young, John B. Burgess.

*Committee on Vegetables*—Edmund Gardner, John B. Burgess, H. S. Packard, John M. Howland, Philip Anthony.

*Committee on Publications*—James B. Congdon, Rec. Sec'y, and the Chairman of the respective Committees on Fruits, Plants and Flowers, on Trees, Shrubs and Entomology, and on Vegetables.

*Committee on Exchanges*—Albert D. Hatch.

RURAL GOTHIC CHURCH.

Hort: May, 1851.